STATE COLLEGE RECORD

Vol. 41 MARCH, 1942 No. 4

The North Carolina State College

of

Agriculture and Engineering

of

THE UNIVERSITY OF NORTH CAROLINA

CATALOG ISSUE

1941 - 1942

Announcements for the Session 1942-1943

STATE COLLEGE STATION
RALEIGH

TABLE OF CONTENTS

COLLEGE CALENDAR

1942-43

	Fall Term 1942	Winter Term 1943	Spring Term 1943
College Faculty Meeting	September 18		
*Registration of Freshmen	September 22	†January 4	†March 26
*Registration of new students admitted with advanced standing	September 23, 24	January 4	March 26
*Registration of Sophomores, Juniors, Seniors, Graduate students	September 25	January 5	March 27
Class work begins	September 28	January 6	March 29
Last day for registration and changes	October 3	January 12	April 3
Anniversary Day (not a holiday)	October 3		
Mid-term reports due	November 2	February 3	May 3
Scholarship Day (not a holiday)			May 12
Armistice Day (not a holiday)	November 11		
Final date for dropping a course without a grade of "F"	November 14	February 13	May 15
Thanksgiving Holiday	November 26		
Final examinations begin	December 11	March 15	June 4
Term ends	December 17	March 20	June 10
Commencement Exercises			June 12

SUMMER SCHOOL—1943

	First Session	Second Session
Registration of all students	June 16	July 28
Class work begins	June 17	July 29
Final date for registration	June 17	July 29
Term ends	July 27	September 4

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

† Each student should register with his class as indicated on his registration card.

1942

JANUARY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SEPTEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

1943

JANUARY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

MARCH						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

APRIL						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JUNE						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JULY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

I. OFFICERS

The Consolidated University of North Carolina

The State College of Agriculture and Engineering, Raleigh
The University of North Carolina, Chapel Hill
The Woman's College of North Carolina, Greensboro

Board of Trustees

Governor James Melville Broughton, President Ex-Officio
Clyde A. Erwin, State Supt. of Public Instruction, Member Ex-Officio
J. C. B. Ehringhaus, Member Ex Officio
O. Max Gardner, Member Ex-Officio
Clyde R. Hoey, Member Ex-Officio
Cameron Morrison, Member Ex-Officio
Alexander B. Andrews, Secretary

Term Expiring April 1, 1943

A. B. Andrews	Raleigh	A. H. Johnston	Asheville
Dudley Bagley	Moyock	C. A. Jonas	Lincolnton
W. D. Barbee	Seaboard	K. P. Lewis	Durham
K. P. Battle	Rocky Mount	A. H. London	Pittsboro
J. A. Bridger	Bladenboro	Mrs. E. L. McKee	Sylva
Mrs. Minnie M. Brown	Chadbourn	J. E. Millis	High Point
C. F. Cates	Faison	A. L. Monroe	Raleigh
Thurmond Chatham	Winston-Salem	K. B. Nixon	Lincolnton
W. G. Clark	Tarboro	J. J. Parker	Charlotte
E. B. Denny	Gastonia	R. J. Reynolds	Winston-Salem
A. M. Dixon	Gastonia	Miss Lelia Styron	New Bern
R. A. Doughton	Sparta	S. F. Teague	Goldsboro
T. C. Hoyle, Jr.	Greensboro		

Term Expiring April 1, 1945

S. M. Blount	Washington	G. C. Green	Weldon
V. S. Bryant	Durham	E. C. Gregory	Salisbury
J. W. Clark	Franklinville	J. S. Hill	Durham
Mrs. Laura W. Cone	Greensboro	H. L. Ingram	Asheboro
H. G. Connor	Wilson	B. K. Lassiter	Oxford
I. P. Davis	Manteo	Mrs. D. H. Lassiter	Charlotte
J. G. Dawson	Kinston	G. B. Mason	Gastonia
C. T. Durham	Chapel Hill	Edwin Pate	Laurel Hill
R. R. Eagle	New Bern	J. C. Pittman	Sanford
J. B. Fearing	Windsor	J. B. Stacy	Ruffin
*A. D. Folger	Mount Airy	John P. Stedman	Lumberton
Jones Fuller	Durham	K. S. Tanner	Spindale
		Leslie Weil	Goldsboro

* Deceased.

Term Expiring April 1, 1947

Mrs. Kate P. Arrington	Warrenton	L. P. McLendon	Greensboro
H. D. Bateman	Wilson	W. D. Merritt	Roxboro
E. H. Bellamy	Wilmington	Walter Murphy	Salisbury
Burton Craige	Winston-Salem	Haywood Parker	Asheville
H. P. Grier, Jr.	Statesville	Clarence Poe	Raleigh
Battle Hocutt	Clayton	J. T. Pritchett	Lenoir
Ira T. Johnston	Jefferson	C. A. Rudisill	Cherryville
J. H. Kerr, Sr.	Warrenton	George Stephens	Asheville
J. Heath Kluttz	Albemarle	F. I. Sutton	Kinston
M. C. Lassiter	Snow Hill	H. P. Taylor	Wadesboro
W. L. Lumpkin	Louisburg	J. W. Umstead	Chapel Hill
G. L. Lyerly	Hickory	Charles Whedbee	Hertford
H. B. Marrow	Smithfield		

Term Expiring April 1, 1949

Miss Emily Austin	Tarboro	R. E. Little	Wadesboro
Miss Annie Moore Cherry	Enfield	Dan K. Moore	Sylva
David Clark	Charlotte	Thomas J. Pearsall	Rocky Mount
James H. Clark	Elizabethtown	J. Hawley Poole	West End
Clyde K. Council	Wananish	J. A. Pritchett	Windsor
Josephus Daniels	Raleigh	Claude W. Rankin	Fayetteville
B. B. Everett	Palmyra	Foy Roberson	Durham
Mrs. R. S. Ferguson	Taylorsville	T. Clarence Stone	Stoneville
James S. Ficklen	Greenville	W. Frank Taylor	Goldsboro
James A. Gray	Winston Salem	Mrs. M. L. Tomlinson	High Point
R. L. Harris	Roxboro	F. E. Wallace	Kinston
W. E. Horner	Sanford	Graham Woodard	Wilson
Hugh Horton	Williamston		

EXECUTIVE COMMITTEE OF THE BOARD

Governor James Melville Broughton, Chairman Ex-Officio
Alexander B. Andrews, Secretary

Mrs. Laura W. Cone	Greensboro	Clarence Poe	Raleigh
Josephus Daniels	Raleigh	R. J. Reynolds	Winston Salem
J. S. Hill	Durham	Mrs. M. L. Tomlinson	High Point
Walter Murphy	Salisbury	Leslie Weil	Goldsboro
Haywood Parker	Asheville	Charles Whedbee	Hertford
J. J. Parker	Charlotte		

ADMINISTRATIVE COUNCIL

The Consolidated University of North Carolina
Frank Porter Graham, President
William Donald Carmichael, Jr., Controller

The North Carolina State College, Raleigh

J. W. Harrelson,
Dean of Administration
William Hand Browne, Jr.,
Professor of Electrical Engineering
M. E. Gardner,
Professor of Horticulture
Thomas Nelson,
Dean of the Textile School
A. J. Wilson,
Professor of Chemistry

The Woman's College, Greensboro

W. C. Jackson,
Dean of Administration
Cornelia Strong,
Professor of Mathematics
Meta H. Miller,
Professor of Romance Languages
J. A. Highsmith,
Professor of Psychology
Guy R. Lyle,
Librarian

The University of North Carolina, Chapel Hill

R. B. House, Dean of Administration
A. R. Newsome, Professor of History
R. E. Coker, Kenan Professor of Zoölogy
Herman Glenn Baity, Professor of Sanitary and Municipal Engineering
William F. Prouty, Professor of Stratigraphic Geology

NORTH CAROLINA STATE COLLEGE

OFFICERS OF ADMINISTRATION

Frank Porter Graham, President of the Consolidated University
William Donald Carmichael, Jr., Controller of the Consolidated University
John William Harrelson, Dean of Administration
Eugene Clyde Brooks, President Emeritus

Faculty Council

John William Harrelson, Chairman
Dean of Administration

Leonard D. Baver, Director,
Agricultural Experiment Station
B. F. Brown,
Dean of the Basic Division
T. E. Browne, Director,
Division of Teacher Education
William Hand Browne, Jr.,
Head Electrical Engineering Department
E. L. Cloyd, Dean of Students
W. L. Mayer,
Director of Registration, and Purchasing Agent
Z. P. Metcalf, Dir. of Instruction, School of Agriculture, and Director of Graduate Studies.
Thomas Nelson, Dean,
Textile School
I. O. Schaub, Dean,
School of Agriculture and Forestry
B. R. Van Leer, Dean,
School of Engineering
Arthur J. Wilson,
Professor of Chemistry

Other Administrative Officers

A. F. Bowen, Treasurer
Harlan Craig Brown, Librarian
A. C. Campbell, Physician
Ray Holder, Assistant
Dean of Students
F. H. Jeter, Director of Publicity
E. S. King, Secretary, Y.M.C.A.
F. E. Miller, Director
of Station Farms
W. F. Morris, Manager
of Service Departments
D. M. Paul, Alumni Secretary
E. W. Ruggles, Director,
College Extension
Juanita Stott,
Assistant Registrar
Baye Sumner,
Assistant Purchasing Agent
John Graves Vann,
Assistant Controller
N. B. Watts, Self-Help Secretary

Special Officers

W. C. Friday,
Dormitory Assistant
W. L. Godwin,
Superintendent of the Laundry
L. H. Harris, Steward
C. D. Kutschinski,
Director of Music
J. P. Pillsbury, Landscape Architect
A. A. Riddle, Superintendent,
the Power Plant
Ross Shumaker, College Architect
L. L. Vaughan, College Engineer
T. T. Wellons,
Superintendent of Dormitories

OFFICERS OF INSTRUCTION

FRANK PORTER GRAHAM, M.A., LL.D., D.C.L., D. LITT., *President of the University.*

JOHN WILLIAM HARRELSON, *Dean of Administration.*
B.E., M.E., N. C. State College; LL.D., Wake Forest College.

EUGENE CLYDE BROOKS, *President Emeritus and Research Professor of Education.*
A.B., LL.D., Trinity College; LL.D., University of North Carolina; Litt.D., Davidson College.

WILLIAM ELTON ADAMS, *Assistant Professor of Mechanical Engineering.*
B.S., Ohio University.

DONALD BENTON ANDERSON, *Professor of Botany.*
B.A., B.Sc. in Ed., M.A., Ph.D., Ohio State University.

RICHARD LEE ANDERSON, *Instructor in Mathematics.*
A.B., DePauw University; M.S., Ph.D., Iowa State College.

BURNICE GORDON ANDREWS, *Instructor in Agriculture.*
B.S., N. C. State College.

LINDSEY OTIS ARMSTRONG, *Associate Professor of Education.*
B.S., M.S., N. C. State College.

LEONARD JAMES ARRINGTON, *Instructor in Economics.*
B.A., University of Idaho.

WILLARD FARRINGTON BABCOCK, *Instructor in Civil Engineering.*
S.B., S.M., Massachusetts Institute of Technology.

WILLIAM ALLEN BAIN, *Assistant Professor of Chemical Engineering.*
B.S., N. C. State College; M.S., University of Wisconsin.

STANLEY THOMAS BALLENGER, *Assistant Professor of Modern Languages.*
A.B., A.M., University of North Carolina.

LUTHER WESLEY BARNHARDT, *Associate Professor of History and Political Science.*
B.A., Trinity College; A.M., University of Wisconsin.

GRADY WILTON BARTLETT, *Assistant Professor of Physics.*
B.S., M.S., N. C. State College.

GEORGE BAUERLEIN, JR., *Assistant Professor of History.*
B.S., Wake Forest College; M.A., University of Pennsylvania.

WILLIAM LUDWIG BAUMGARTEN, *Assistant Professor of Architecture.*
A.A., Imperial Academy of Fine Arts of Vienna, Austria.

LEONARD DAVID BAVER, *Director, Agricultural Experiment Station.*
B.S., M.S., Ohio State University; Ph.D., University of Missouri.

WILLIAM HIGGINS BESSEY, *Instructor in Physics.*
S.B., University of Chicago; M.S., D.Sc., Carnegie Institute of Technology.

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

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

FRANCIS COOLIDGE BRAGG, *Instructor in Mechanical Engineering.*
B.S. in M.E., Worcester Polytechnic Institute.

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

WILLIAM STALEY BRIDGES, *Associate Professor of Mechanical 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, *Associate Professor of Electrical Engineering.*
B.S. in E.E., University of Texas; M.S. in E.E., Massachusetts Institute of Technology.

THEODORE CECIL BROWN, *Assistant Professor of Mechanical Engineering.*
B.S. in M.E., M.E., University of Kentucky.

THOMAS WATSON BROWN, *Professor of Military Science and Tactics.*
Colonel, Infantry, U. S. Army; Graduate, School of the Line; Graduate, General Staff School; Graduate, Army War College.

THOMAS EVERETTE BROWNE, *Director of the Division of Teacher Education.*
A.B., Wake Forest College; M.A., 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, *Assistant Professor of Botany.*
A.B., Cornell University; M.A., Ph.D., University of Minnesota.

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

JAMES CHARLES BUNN, *Instructor in Mathematics.*
B.S., Wake Forest College.

KENNETH WALTER CAMERON, *Instructor in English.*
A.B., A.M., West Virginia University; S.T.B., General Theological Seminary; Ph.D., Yale University.

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

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

CHARLES CUMSTON CHADBOURN, JR., *Instructor in English.*
B.A., Union College; M.A., Teachers College, Columbia University.

JESSE WAYNE CHALFANT, *Assistant Professor of Forestry.*
B.S., Pennsylvania State College; M.F., Yale University.

JAMES CHARLES CHEATHAM, *Instructor in Mechanical Engineering.*
B.S. in M.E., Clemson College; M.S., A. & M. College of Texas.

BYRON SILER CLAPP, *Assistant Professor of Military Science and Tactics.*
First Lieutenant, Infantry-Reserve; B.S., N. C. State College.

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

JOHN MONTGOMERY CLARKSON, *Associate Professor of Mathematics and Experimental-Statistics.*
A.B., Wofford College; A.M., 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, *Professor of Soils.*
B.S., M.S., Ohio State University; Ph.D., University of Wisconsin.

---

‡ On leave.

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

†WALTER BINGHAM COCHRAN, *Assistant Professor of Military Science and Tactics.*
Major, Infantry, U. S. Army; Graduate, Infantry School, Fort Benning, Georgia.

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

*EMERSON R. COLLINS, *Associate Professor of Soils.*
B.S., Pennsylvania State College; Ph.D., Iowa State College.

PAUL EDWIN COLLINS, *Instructor in Chemistry.*
A.B., Peru, Nebraska, State Teachers College; M.S., Virginia Polytechnic Institute.

NORVAL WHITE CONNER, *Associate Professor of Engineering Mechanics.*
B.S., M.E., Virginia Polytechnic Institute; M.S., Iowa State College.

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

HENRY CHARLES COOKE, *Instructor in Mathematics.*
B.S., N. C. State College.

RALPH LELAND COPE, *Assistant Professor of Mechanical Engineering.*
B.S. in M.E., B.S. in Ind. Educ., M. Ed., Pennsylvania State College.

GERTRUDE MARY COX, *Professor of Experimental Statistics.*
B.S., M.S., Iowa State College.

‡GEORGE EDWARD CROUCH, *Instructor in Physics.*
B.S., Furman University; M.S., Vanderbilt University; Ph.D., University of North Carolina.

GEORGE REDIN CULBERSON, *Instructor in Yarn Manufacture.*
B.S., N. C. State College.

RALPH WALDO CUMMINGS, *Professor of Agronomy.*
B.S., N. C. State College; Ph.D., Ohio State University.

PHILIP HARVEY DAVIS, *Instructor in English.*
B.A., A.M., Miami University.

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

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

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

THOMAS CLARE DOODY, *Assistant Professor of Chemical Engineering.*
B.S., M.S., Ph.D., University of California.

JOSEPH NEWTON FARLOW, *Instructor in Engineering Mechanics.*
B.C.E., N. C. State College.

‡CHARLES EDWARD FELTNER, *Assistant Professor of Engineering Mechanics.*
B.S., Virginia Polytechnic Institute; S.M.C.E., University of North Carolina.

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

EDWARD YORK FLOYD, *Assistant Professor of Field Crops.*
B.S., N. C. State College.

JAMES FONTAINE, *Associate Professor of Civil Engineering and Assistant Director of the Engineering Experiment Station.*
B.E., M.S., N. C. State College.

---

† Transferred Dec. 1, 1941.
* Resigned.
‡ On leave.

†GASTON GRAHAM FORNES, *Assistant Professor of Military Science and Tactics.*
Captain, Infantry-Reserve; 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.

JOHN ERWIN FOSTER, *Professor of Animal Husbandry and Dairying.*
B.S., N. C. State College; M.S., Kansas State College; Ph.D., Cornell University.

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

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

WILLIAM GEORGE FRIEDRICH, *Instructor in Aeronautical Engineering.*
M.M.E., Dr. of Technical Sciences, Polytechnical University of Prague; M.Ae.E., Ecole Nationale Aeronautique (Paris).

BENTLEY BALL FULTON, *Professor of Entomology.*
B.A., Ohio State University; M.S., Chicago University; Ph.D., Iowa State College.

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

IRVIN O. GARODNICK, *Instructor in Modern Languages.*
B.S., M.S., N. C. State College.

HERMAN CHRISTIAN GAUGER, *Assistant Professor of Poultry Science.*
B.S., Connecticut State College; M.S., N. C. State College.

CHARLES NELSON GAYLORD, *Instructor in Engineering Mechanics.*
B.S.C.E., Ohio University; M.S.E., University of Michigan.

ABE GELBART, *Instructor in Mathematics.*
B.Sc., Dalhousie University; Ph.D., Massachusetts Institute of Technology.

HARVEY TAYLOR GIBSON, *Instructor in English.*
A.B., Furman University; M.A., Duke University.

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

*RICHARD SYLVESTER GLASSCOCK, *Assistant Professor of Animal Husbandry.*
B.S., Oklahoma A. & M. College; M.S., West Virginia University; Ph.D., University of Illinois.

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

JAMES HENRY GRADY, *Instructor in Architecture.*
B. Arch., Ohio State University.

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; D.Sc., Alfred University.

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

ROBERT EDWARD LEE GREENE, *Associate Professor of Agricultural Economics.*
B.S., M.S., North Carolina State College; Ph.D., Cornell University.

DAVID WOLTER GREGORY, *Instructor in Poultry Science.*
B.S., Kansas State College; 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.

† On leave from Mechanical Engineering Department.
* Resigned.

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

‡FRANK FARRIER GROSECLOSE, *Professor of Industrial Engineering.*
B.S. in M.E., M.S. in M.E., Virginia Polytechnic Institute.

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

CHARLES HORACE HAMILTON, *Professor of Rural Sociology.*
B.A., Southern Methodist University; M.S., Texas A. & M. College; Ph.D., University of North Carolina.

REINARD HARKEMA, *Associate Professor of Zoölogy.*
A.B., Calvin College; Ph.D., Duke University.

THOMAS PERRIN HARRISON, *Dean Emeritus of the College; Editor of Official College Publications.*
B.S., Citadel; Ph.D., Johns Hopkins University; LL.D., Citadel.

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

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

PAUL HENRY HARVEY, *Associate Professor of Field Crops.*
B.S., University of Nebraska; Ph.D., Iowa State College.

ARTHUR COURTNEY HAYES, *Assistant Professor of 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.

DAVID ELDRIDGE HENDERSON, *Instructor in Industrial Engineering.*
B.S. in M.E., University of North Carolina.

ANDY T. HENDRIX, *Associate in Farm Machinery.*
B.S.M.E., M.S.M.E., B.S.E.E., University of Tennessee.

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

ELMER GEORGE HOEFER, *Professor of Mechanical Engineering.*
B.S. in M.E., M.E., University of Wisconsin.

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

SIDNEY W. HOLMAN, *Instructor in Field Corps.*
In charge of Cotton Classing Service, U. S. Department of Agriculture, North Carolina.

ROBERT HOOKE, *Instructor in Mathematics.*
A.B., A.M., University of North Carolina; A.M., Ph.D., Princeton University.

JOHN ISAAC HOPKINS, *Instructor in Physics.*
B.S., A.M., Ph.D., Duke University.

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

THOMAS EDWARD HYDE, *Instructor in Mechanical Engineering.*

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

---

‡ On leave.

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

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

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

HENDERSON GRADY KINCHELOE, *Instructor in English.*
A.B., University of Richmond; A.M., Harvard University.

LEONARD MARION KNIGHT, *Instructor in Military Science and Tactics.*
Sergeant, DEML, U. S. Army.

‡WILLIAM WURTH KRIEGEL, *Associate Professor of Ceramic Engineering.*
B.S. in Civil and Ceramic Engineering, University of Washington; M.S., Montana School of Mines; Dr.Ing., Technische Hochschule, Hanover, Germany.

ARTHUR NEWMAN KRUGER, *Instructor in English.*
A.B., University of Alabama; Ph.D., Louisiana State University.

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

ROBERT EDGAR LAKE, *Instructor in Mechanical Engineering.*
B.S., M.S., University of Alabama; Ph.D., Pennsylvania State College.

CLAUDE MILTON LAMBE, *Assistant Professor of Civil Engineering.*
B.E., N. C. State College.

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

JOSEPH LETOURNEAU LANCASTER, *Assistant Professor of Military Science and Tactics.*
Lieutenant Colonel, Infantry, U. S. Army; A.B., Creighton University; Graduate Infantry School, Fort Benning, Georgia.

NILS GUNNAR LANGE, *Assistant Professor of Agricultural Economics.*
M.A., Ph.D., University of Stockholm, Sweden.

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

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

JOHN EMERY LEAR, *Professor of Electrical Engineering.*
B.S. in E.E., Virginia Polytechnic Institute; E.E., Texas A. & M. College.

WILLIAM DANIEL LEE, *Assistant Professor of Agronomy.*
B.S., N. C. State College.

†CHARLES ROMEO LEFORT, *Assistant Professor of Military Science and Tactics.*
First Lieutenant, Infantry-Reserve; B.S., N. C. State College.

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

HENRY PETERSON LEIGHTON, *Instructor in Military Science and Tactics.*
Staff Sergeant, DEML, U. S. Army.

JOHN ANTHONY LEIPOLD, *Instructor in Military Science and Tactics.*
Technical Sergeant, DEML, U. S. Army.

PAUL BONAR LEONARD, *Instructor in Mechanical Engineering.*
B.S., Ohio State University.

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

---

‡ On leave.

† On leave from Dean of Students Office.

JOHN GARY LEWIS, *Associate Professor of Knitting.*
B.S., M.S., N. C. State College.

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

RICHARD HENRY LOEPPERT, *Instructor in Chemistry.*
B.S., Northwestern University; Ph.D., University of Minnesota.

ROY LEE LOVVORN, *Associate Professor of Field Crops.*
B.S., Alabama Polytechnic Institute; M.S., University of Missouri.

JOHN ROBERT LUDINGTON, *Associate Professor of Industrial Arts Education.*
B.S., Ball State Teachers College; M.A., Ph.D., Ohio State University.

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

FRANK HALLAM LYELL, *Assistant Professor of English.*
A.B., University of Virginia; M.A., Columbia University; Ph.D., Princeton University.

CHARLES WALKER MADDISON, *Foreman of Foundry.*

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

WILLIAM ROSSER MANN, *Instructor in Aeronautics.*
B.S., N. C. State College.

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

‡JOE THOMAS MASSEY, *Instructor in Engineering Mechanics.*
B.S., N. C. State College.

SELZ CABOT MAYO, *Assistant Professor of Rural Sociology.*
A.B., Atlantic Christian College; M.S., N. C. State College.

FREDERICK HAROLD MCCUTCHFON, *Associate Professor of Zoölogy.*
B.S., M.S., North Dakota State College; Ph.D., Duke University.

WILLIAM MCGEHEE, *Associate Professor of Psychology.*
B.A., University of the South; M.A., Ph.D., Peabody College.

ROBERT LEROY MCMILLAN, *Instructor in Business Law.*
A.B., M.A., Wake Forest College; LL.B., Columbia University.

FRANK BARNARD MEACHAM, *Assistant Professor of Zoölogy and Entomology.*
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, Professor of Zoölogy, and Director of Graduate Studies.*
B.A., Ohio State University; D.Sc., Harvard University.

GORDON KENNEDY MIDDLETON, *Professor of Field Crops.*
B.S., N. C. State College; M.S., Ph.D., Cornell University.

MARSHALL WILLIAM MILLAR, *Instructor in Education.*
B.S., Stout Institute.

JOHN FLETCHER MILLER, *Professor 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, *Professor of Zoölogy and Entomology.*
B.S., Massachusetts Agricultural College; M.S., N. C. State College; D.Sc., Harvard University.

---

‡ On leave.

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

DANNIE JOSEPH MOFFIE, *Instructor in Psychology.*
B.S., M.S., Ph.D., Pennsylvania State College.

ROBERT JAMES MONROE, *Instructor in Experimental-Statistics.*
B.S., Iowa State College.

†PERRY EARL MOOSE, *Assistant Professor of Military Science and Tactics.*
Major, Infantry-Reserve; B.S., N. C. State College; M.S. in C.E., Purdue University.

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

HOWARD M. NAHIKIAN, *Assistant Professor of Mathematics.*
A.B., M.A., Ph.D., University of North Carolina.

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

WILLIAM MCCORMICK NEALE, *Instructor in Mechanical Engineering.*
B.E., M.E., N. C. State College.

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

WILLIAM BRYAN NESBITT, *Instructor in Poultry.*
B.S., N. C. State College.

JOHN HERVEY NICHOLS, *Instructor in Electrical Engineering.*
B.S. in E.E., N. C. State College.

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, *Assistant Professor of Mathematics.*
A.B., Lenoir Rhyne College; M.A., Ph.D., University of North Carolina.

JOHN MASON PARKER, III, *Assistant Professor of Geology.*
A.B., A.M., Ph.D., Cornell University.

WILLIAM LOCKWOOD PARKER, *Instructor in Physics.*
B.A., Reed College; A.M., Ph.D., University of Illinois.

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

JEHU DEWITT PAULSON, *Associate Professor of Architecture.*
B.F.A., Yale University.

FLETCHER WILLIAM PEARCE, *Associate Professor of Civil Engineering.*
B.S., University of Michigan, M.S., University of Texas.

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

J. RODNEY PILAND, *Assistant Professor of Soils.*
B.S., Wake Forest College; M.S., N. C. State College.

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

JOSEPH ALEXANDER PORTER, JR., *Assistant Professor of Weaving and Designing.*
B.S., N. C. State College.

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

---

† On leave from Mechanical Engineering Department.

‡ On leave.

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

ROBERT FRANKLIN RAUTENSTRAUCH, *Assistant Professor of Aeronautical Engineering.*
B.S., Princeton University; M.S., New York University.

WILLIS ALTON REID, *Assistant Professor of Chemistry.*
B.S., Wake Forest College; Ph.D., Wisconsin University.

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

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

JACKSON ASHCRAFT RIGNEY, *Associate Professor of Field Crops, and Experimental-Statistics.*
B.S., New Mexico State College; M.S., Iowa State College.

MACON ROGERS ROWLAND, *Assistant Professor of Mechanical Engineering.*
B.S., M.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.

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

HOWARD ERNEST SATTERFIELD, *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; D.Sc., Clemson College.

ROBERT SCHMIDT, *Associate Professor of Horticulture.*
B.Sc., Rutgers University.

HERBERT FREDERICK SCHOOF, *Instructor in Zoölogy and Entomology.*
B.S., M.S., N. C. State College; Ph.D., University of Illinois.

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

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

CHARLES WILLIAM SEEKINS, *Instructor in Mathematics.*
A.B., Occidental College.

JOHN FRANK SEELY, *Instructor in Chemical Engineering.*
B.S., M.S., N. C. State College.

JAMES ATKINS SHACKFORD, *Instructor in English.*
B.A., Emory and Henry; M.A., Peabody College.

ALFRED O. SHAW, *Professor of Animal Husbandry.*
B.S., M.S., University of Idaho; Ph.D., Pennsylvania State College.

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

LUTHER SHAW, *Professor of Plant Pathology.*
B.S., N. C. State College; M.S., University of Arkansas; Ph.D., University of Wisconsin.

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

MARSHALL LEROYCE SHEPHERD, *Assistant Professor of Military Science and Tactics.*
Captain, Infantry-Reserve; B.S., N. C. State College; M.A., Cornell University.

WILLIAM EDWARD SHINN, *Professor of Weaving and Designing.*
B.S., M.S., N. C. State College.

MERLE FRANKLIN SHOWALTER, *Associate Professor of Chemistry.*
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 Architecture.*
B.Arch., Ohio State University; Registered Architect.

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

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

BENJAMIN WARFIELD SMITH, *Assistant Professor of Field Crops.*
B.A., M.A., University of Virginia; Ph.D., University of Wisconsin.

CLYDE FUHRIMAN SMITH, *Assistant Professor of Entomology.*
B.S., M.S., Utah State Agricultural College; Ph.D., Ohio State University.

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

JAMES NEAL SMITH, JR., *Instructor in Ceramic Engineering.*
B.Cer.E., N. C. State College; M.S., University of Alabama.

JOHN WARREN SMITH, *Associate Professor of Industrial Education.*
B.S., Miami University, Oxford, Ohio; M.S., Columbia University.

RAYMOND FRANKLIN STAINBACK, *Assistant Professor of Physics.*
S.B., M.S., University of North Carolina.

ROSS OLIVER STEVENS, *Professor of Zoölogy.*
B.S., M.S., University of Michigan.

EDWARD HOYLE STINSON, *Instructor in Mechanical Engineering.*
B.S., N. C. State College.

ROBERT LEGRANDE STONE, *Assistant Professor of Ceramic Engineering.*
B.S. in Cer.E., Missouri School of Mines and Metallurgy; M.S., N. C. State College.

CHARLIE CARMEN STOTT, *Assistant Professor of Military Science and Tactics.*
First Lieutenant, Infantry-Reserve; B.S., N. C. State College.

CHARLES FREDERICK STROBEL, *Instructor in Mathematics.*
A.B., A.M., University of Buffalo; Ph.D., University of Illinois.

ARCHIE DAVID STUART, *Associate Professor of Field Crops.*
B.S., M.S., N. C. State College.

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

PAUL PORTER SUTTON, *Instructor in Chemistry.*
Ph.D., Johns Hopkins University.

HORACE CARTER THOMAS, *Instructor in Military Science and Tactics.*
Technical Sergeant, DEML, U. S. Army.

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

BLAKE RAGSDALE VAN LEER, *Dean of the School of Engineering.*
B.S. in E.E., M.E., Purdue University; M.S., University of California.

WILLIAM GARDNER VAN NOTE, *Associate Professor of Chemical Engineering.*
Ch.E., Rensselaer Polytechnic Institute; M.S., University of Vermont; Ph.D., Pennsylvania State College.

---

‡ On leave.

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

EDMUND MEREDITH WALLER, *Assistant Professor of Physical Education, and Assistant Coach.*
A.B., Vanderbilt University; M.A., Peabody College.

ROBERT SULLIVAN WARREN, *Assistant Professor of Physical Education and Head Coach of Basketball.*
D.O., American School of Osteopathy; B.S., N. C. State College; M.A., University of North Carolina.

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

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

LLOYD THORNTON WEEKS, *Instructor in Field Crops.*
B.S., N. C. State College.

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

JOHN FRANK WEST, *Instructor in Geological Engineering.*
B.S., M.S., University of Wisconsin.

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

RAYMOND CYRUS WHITE, *Instructor in Chemistry.*
B.S., Davis Elkins College; M.S., Ph.D., West Virginia University.

LARRY ALSTON WHITFORD, *Assistant Professor of Botany.*
B.S., M.S., N. C. State College; Ph.D., Ohio State University.

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

†FRED CARTER WILLIAMS, *Assistant Professor of Military Science and Tactics.*
First Lieutenant, Infantry-Reserve; B.S., N. C. State College; B.S., University of Illinois; Registered Architect.

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.

EDWIN WEEMS WINKLER, *Assistant Professor of Electrical Engineering.*
S.B., Montana State College; M.S., University of North Carolina.

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

LOWELL SHERIDAN WINTON, *Associate Professor of Mathematics.*
B.S., Grove City College; M.A., Oberlin College; Ph.D., Duke University.

THOMAS WILMONT WOOD, *Associate Professor of Industry and Personnel Management.*
B.S., A.M., University of Alabama; Ph.D., University of North Carolina.

---

† On leave from Department of Architecture.

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.

Teaching Fellows, 1941-42

H. P. Andrews	Chemistry
M. K. Berkut	Chemistry
M. P. Bridge	Teacher Education
P. J. Brown	Animal Husbandry and Dairying
Robert F. Coleman, Jr.	Civil Engineering
C. L. Dickinson	Chemical Engineering
L. E. Elrod	Chemistry
W. L. Feezor	Chemistry
Nathan S. Hall	Agronomy
M. A. Hoffman	Chemistry
W. T. Hunt, Jr.	Engineering Mechanics
Albert Kelner	Botany
R. Kronsdadt	Chemistry
J. W. Lodwick	Agronomy (Resigned)
W. A. Mappus	Chemistry
Elmo F. McClain	Zoölogy
Dan Moss	Textiles
J. F. Mynes	Electrical Engineering
Wright F. Parker	Poultry
Thomas L. Quay	Zoölogy
Maurice Rothberg	Rural Sociology
Stewart C. Schell	Zoölogy
Lloyd Seatz	Agronomy
Richard K. Speairs, Jr.	Botany
Kefton H. Teague	Geology
E. K. Veach	Teacher Education
B. F. Volkerding	Botany
Charles K. Watson	Textiles
H. A. Whitten	Chemistry

II. GENERAL INFORMATION

THE COLLEGE

Establishment.—The North Carolina State College of Agriculture and Engineering is one of the Land-Grant Colleges established under the provisions of the Morrill Act, passed by the Congress of the United States, June 2, 1862. The first session of the College was that of 1889-1890. Prior to that date, the funds received by the State under the Land Grant Act had been used by the University of North Carolina, at Chapel Hill.

The name, The North Carolina College of Agriculture and Mechanic Arts. used in the establishment of the College. was changed by the General Assembly—the Legislature of the State—in 1917 to its present form.

In its session of 1931, the General Assembly passed an Act, of which the following is the first section: "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'."

This Act placed the three institutions under one Board of Trustees and one President, the separate affairs of each institution being in charge of its own Administrative Dean. The effect of the Act, by correcting unnecessary duplication and focalizing the work of each of its members, has tended to create a strong, unified State University.

Location.—State College Campus of one hundred twenty-five acres, lies within the limits of Raleigh, a mile and a quarter west of the State Capitol. on United States Highway, Route 1. Adjoining the Campus westward, occupying four hundred forty-five additional acres, are the College poultry yards, and the Central State Experiment Farms. A mile still farther westward, the College has acquired a tract of thirteen hundred acres, which is maintained as livestock farms by the Department of Animal Husbandry and Dairying. The part of this tract—about 500 acres—not adapted for these farms is being used by the Department of Forestry for demonstrations and development.

Organization.—The organization of State College has as its objectives Campus Teaching, Extension Teaching, and Research.

Campus Teaching occupies the School of Agriculture and Forestry, the School of Engineering, the Division of Teacher Education, the Textile School, the Graduate Division, the Basic Division, and the Summer Session. The Schools and the Basic Division are organized for teaching by Departments. The details of the organization, the equipment, and the work of each School and Department are given under the various headings in the later pages of this Catalog. The work of the Summer Session is set forth in a special issue of STATE COLLEGE RECORD published each year in December, a copy of which is sent on request.

The Department of Military Training, including as the Reserve Officers Training Corps students of all classes in all Schools, is placed immediately under the College Administration.

Extension Teaching is directed under the Division of College Extension. The work is closely coördinated with the work in the regular Departments of the College. In certain short courses, most of them in Agriculture and in Engineering, Extension overlaps with Campus Teaching. The whole State is covered in the activities of the Agricultural Extension Service.

Research is conducted, by individuals or by Departments, very generally at State College. Specially organized work is done through the Agricultural Experiment Station, the Engineering Experiment Station, and the Textile Research Department.

The Campus.—The Campus of State College presents an agreeably rolling terrain with adequate space west and south for expansion. Located on the eastern edge of the Piedmont Region of the State, within twenty-five miles of the Coastal Plain, opportunity is afforded for a pleasing variety of trees and shrubs in the landscaping. Fortunately, in the early years of the College a long range plan for growth was made. This plan is now being intelligently followed.

Under the sections of the Catalog devoted to Schools and their Departments and to Divisions, are placed descriptions of buildings, laboratories, and facilities of each of these.

General Service Buildings. Holladay Hall, named for Colonel Alexander Quarles Holladay, first President of the College, 1889-1899, contains the general administrative offices of the College, and the offices and classrooms of the Military Department.

The D. H. Hill Library, named for Doctor Daniel Harvey Hill, President of the College, 1908-1916, was dedicated in 1926. It contains now over 62,000 volumes, exclusive of Government documents, and pamphlets.

The Y. M. C. A. building, the erection of which was made possible by a donation from the Rockefeller Foundation, serves the religious and social life of the College.

The Dining Hall, an H-shaped building, with kitchens, storage rooms, pantries, refrigerators, and other mechanical devices in the center and basement, has at each side, front and rear, a spacious dining hall. The service is on the cafeteria plan.

The Frank Thompson Gymnasium, named in honor of Frank Martin Thompson, distinguished athlete, graduate of State College, Class of 1910, killed in service during the World War, is thoroughly equipped and modern in all its appointments.

The Infirmary, recently enlarged and renovated, is a model of a small, special hospital.

Pullen Hall, named in honor of R. Stanhope Pullen, donor of first sixty acres of the College land, has classrooms on the first and basement floors, on the second floor, the College auditorium.

The Power Plant, recently erected, centrally located, furnishes heat, electric power, and hot water to all buildings on the Campus using these services.

Eleven College Dormitories now in use accommodate approximately 1400 students. Other students will room, as at present, in homes in the vicinity of the Campus and in fraternity houses. Full information in regard to dormitories is sent by the Registrar to applicants accepted for admission to the College, or by the Superintendent of Dormitories.

INFORMATION FOR APPLICANTS

I. Admission

1. The first step toward admission to State College is to get from the Registrar, who is to be addressed at State College Station, Raleigh, a certificate blank. After the blank has been filled out and signed by the principal or the superintendent of the high school or other preparatory school, the certificate is sent to the Registrar for his decision on admission, notice of which will be given promptly.

The certificate must contain a statement from the school last attended of the good moral character of the applicant.

2. Undergraduate students may be admitted as regular or special.

(1) A regular student is one who is registered in a four-year curriculum.

(2) Women may be admitted as regular students provided they register in one of the regular curricula.

(3) A special student is a person of mature age already engaged in some vocation in which instruction is desired. Such person may, upon presenting a satisfactory record of education and upon recommendation of the Dean of the School concerned, be admitted without the usual entrance requirements.

Special students are not eligible for a degree, nor does work done as a special student have value for credit toward a degree. A special student cannot represent the College in any intercollegiate contest nor become a member of a fraternity.

3. Requirements for admission of regular students

(1) Sixteen years is the minimum age for admission.

(2) Graduation from a State accredited high school, or an approved preparatory school, and fifteen units of credit, specified and elective as indicated below, are required for admission to the freshman class of four-year courses.

*(3) Nongraduates who have completed the eleventh grade may be admitted under the following conditions:

(a) If they have the specified subject requirements and units of credit indicated below.

(b) If they are in the upper third of their class scholastically.

(c) If they have the principal's recommendation.

(d) If they pass successfully the College entrance examination.

* This method of admission is experimental and its continuance will depend upon the results obtained.

(4) Applicants graduated by nonaccredited four-year high schools may be admitted by passing successfully an entrance examination such as that prepared by the Examination Committee of the North Carolina College Conference.

(5) In exceptional instances a person of mature age may be admitted by the Dean of a School on the basis of his ability to carry the regular work of a curriculum in that School.

(6) Subjects and units of credit (a unit is allowed for a subject pursued for a year, five periods a week, each period being at least forty minutes, and successfully passed in a high school accredited by the North Carolina State Department of Public Instruction or other preparatory school accredited by competent authority).

Specified Subjects.—	Units of Credit
English: Grammar, Composition, Literature	3
History: United States or equivalent	1
Algebra to Quadratics	1
Algebra, Quadratics through Progressions	.5
Plane Geometry	1
*Solid Geometry	.5
Any science listed under Elective Subjects	1

A student not offering for credit History of the United States is required to take the subject in his College course.

Elective Subjects. The figure following each subject represents the maximum number of credits which will be accepted, including those in required subjects. Fewer than that number may be accepted.

Science—	Units of Credit	**History and Social Science—**	Units of Credit
Biology	1	United States or equivalent	1
Botany	1	English	1
Chemistry	1	General	1
General Science	1	Medieval and Modern	1
Geography	1	Ancient	1
Physics	1	North Carolina	.5
Physiology and Hygiene	1	Civics	1
Zoölogy	1	Sociology	1
		Economics	1
Language—		**Mathematics—**	
English	4	Algebra	2.5
French	2	Business Arithmetic	1
German	2	Plane Geometry	1
Latin	4	Solid Geometry	.5
Spanish	2	Trigonometry	.5

* Solid Geometry is required only in the School of Engineering. A special course is offered in college for applicants who do not present this credit for entrance. No college credit is allowed for the course.

Miscellaneous Subjects (a total of not over 4 credits allowed)

Agriculture	4	Drawing	1
Bookkeeping	1	Mechanic Arts	2
Stenography and Typewriting	1	Mill Practice	1
Any other high-school subject		1	

4. Advanced standing is allowed on work done in approved colleges upon presentation of a certificate or transcript, duly signed and sealed, to the Director of Registration. The transcript is evaluated in the Registration Office to determine the maximum amount of credit and is then sent to the Dean of the School concerned for a detailed evaluation of credits which can be used in the curriculum selected.

Because of the scholastic requirements imposed upon resident students, advanced standing credit cannot be allowed for courses passed at other institutions with the lowest passing letter grade, or corresponding numerical grades. At least one year in residence is required for a degree.

II. Expenses

Undergraduate

1. The total College expenses of a student resident of North Carolina need not for the regular College year exceed $450, for a nonresident of this State, $620. These amounts include the cost of room and board, heat and lights, tuition, fees and deposits, books, drawing instruments, laundry, and necessary incidentals. They do not include clothing, pocket money, or other incidentals.

2. Nonresidents of North Carolina pay an additional tuition charge. The College Administration has defined a nonresident student as a person who comes into North Carolina from another state for the purpose of attending college.

In order to draw a clear line between resident and nonresident students, the Administration has ruled that all students whose parents have not been domiciled in North Carolina for more than six months immediately preceding the day of their first enrollment in the institution shall be termed nonresident students, with the following exceptions:

(1) Students twenty one years of age at the time of their first matriculation who have resided in North Carolina for more than one year preceding the day of their first enrollment.

(2) Children of regular employes of the Federal Government stationed in the State of North Carolina.

(3) Children of regular employes of the Federal Government who are employed outside of the State, but who through law are permitted to retain their North Carolina citizenship.

(4) Students in summer session.

Students cannot claim a change in their resident status after matriculating. Students furnishing incomplete or incorrect information in order to obtain the special State resident status shall be liable for dishonorable dismissal.

3. The State law requires the prepayment of College accounts: the time and the amount of payments must conform to this law. For the convenience of students, charges for tuition and fees may be made in two installments, one in September, one in January. Six percent is charged on payments deferred beyond these dates.

4. Applications for credit must be made to the Business Office of the College, prior to registration day. Applications made later, if granted, will require a special fee of $5 and possibly also the fee for late registration.

5. For each failure to meet deferred payments as scheduled, a fee of $5 is charged.

6. Tuition and fees for residents of North Carolina as regular undergraduates or as special students scheduled for twelve or more credit hours are as follows:

	September Payment	January Payment
Tuition	$40	$40
College Fees	37	37
Student Activities Fee	4	4
Athletic Fee	8	7
Agricultural, and Agricultural-Education Students Fee	2	2
*Engineering Students Fee	2	1
Textile Students Fee	1	2
Military Deposit	10	

Note.—Tuition and Fees are subject to change by the Board of Trustees without advance notice.

7. Any part of the military deposit left after paying for lost or damaged equipment is returned.

8. Nonresidents of North Carolina registered in Forestry and Textile will pay an additional $60 in September and $60 in January. Nonresident students registered in other curricula will pay an additional $85 in September and $85 in January.

9. Expenses include also the following:

	September	January
Room Rent, if not already paid	$16.50 to $27.00	$16.50 to $27.00
Book and Supplies	20.00 to 35.00	8.00
Drawing Equipment for those taking Drawing	7.50 to 17.50	
Military Shoes and Supplies (about)	7.50	

* Of the Engineering fee of $3, the students pay $1 for a year's subscription to "The Southern Engineer."

10. Room rent for the rest of the College year is the only regular payment at the March registration.

11. College fees include those for registration, for hospital and medical attention, for library and lectures, for laboratories and classrooms, and for physical education.

12. Student-activities fees include those for student government, student publications, and general student activities.

13. Freshmen, unless living at home with their parents, are required to room in specified College dormitories.

14. Reservation of a room and the first payment of rent must be made before August 15 to obtain the most desirable room available. A reservation may be canceled and the payment therefore refunded upon notice before September 1, not later. Information about rooms may be had by writing Superintendent of Dormitories.

15. Dormitory rooms have necessary furniture, but each student must bring his own blankets, bed linen, and towels.

16. Board at the College Cafeteria may be paid in cash for each meal, or in tickets sold at the Cafeteria in books of $5.00 value for the convenience of students.

17. Applicants who desire information regarding part-time employment should address their inquiries to the Self-Help Secretary. The Self-Help Secretary will, upon request, write of possible employment to those wishing to earn, while in College, money to help in paying expenses.

18. A refund of the amount paid the College, less the registration fee and a reasonable charge for lodging and services, is made to a student withdrawing within ten days from the date of registration; on withdrawal later, no refund will be made except of the military deposit.

Graduate and Special Students

For graduate students and for special students taking fewer than twelve credit hours the fees are:

(1) Registration fee, $2.00 per term.

(2) For each credit hour per term, $3.00, not including student-activities or athletic fees, which are optional.

III. Registration

1. A program of exercises during the first week is given each applicant for admission to the freshman class on his arrival upon the Campus.

2. The Certificate of Admission approved beforehand by the Registrar for the School and the Department in which the applicant wishes to register must be ready for presentation.

3. The dates indicated in the College Calendar for the registration of freshmen, of those applying for advanced credit, and of sophomores, juniors, seniors, and graduate students, must be strictly observed.

4. For registration after the scheduled date, an extra fee of $2 is required for the first day and $1 for each additional day until a maximum of $10 is reached.

5. Directions in detail for registration are furnished each student on entering the registration room—the Gymnasium.

6. Vaccination against smallpox is required at the time of registration unless the applicant furnishes a doctor's certificate indicating he has been successfully vaccinated within two years preceding his registration.

7. Inoculation against typhoid fever, though not compulsory, is urgently suggested for those entering the College. Free inoculation is offered by the College to all students.

8. All new students will be given the Tuberculin Skin Test unless they present a statement from their family physician indicating that such a test has been taken during the past year.

9. Admission to classes is permitted only after complete registration certified on the official card of the Registrar. All instructors will enforce this rule.

IV. Financial Aids and Scholarships

1. **The Self-Help Secretary** of the College Y. M. C. A. (see page 40) will assist those desiring employment to help pay expenses.

2. **A Student Loan Fund,** first established by the State College Alumni Association, amounting now to $34,000, renders assistance to needy students of talent and high character. The Fund includes the **Finley Loan Fund** of $1,000 (see below), the **Masonic Loan Fund,** $4,500, the **Frank M. Harper Loan Fund,** $200, and the **Escheats Loan Fund** of $15,000.

At present, loans, restricted to juniors and seniors, are made at 6 percent on good security. The fund being small and kept loaned out, new loans can be made only as old ones are repaid.

The Finley Loan Fund is a memorial of William Wilson Finley by the Southern Railway Company, of which Mr. Finley was, at the time of his death, president. It is designated for needy students in Agriculture.

3. **The John Gray Blount Scholarships** were endowed by Colonel W. B. Rodman, of Norfolk, Virginia, in memory of his great-grandfather. The maximum value of each of the two scholarships is $195.

4. **The Champion Paper and Fibre Company** provides a fund for a Fellowship to encourage graduate study and research in Chemical Engineering.

5. **The Syd Alexander Scholarhip** 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 State College. The returns from the endowment—$5,000 are awarded to a student native and resident of Mecklenburg County, North Carolina, who is pursuing a course in the School of Textiles of State College.

6. **The Barrett Company,** Distributors of Arcadian American Nitrate of Soda, offers to 4-H Club members the following one-year scholarships:

(1) To the member with the most distinguished record with a Corn-Club project.
(2) To the member with the most distinguished record in Cotton-Club work.
(3) To the member with the best Tobacco-Club record.
(4) To the member with the best record in Horticulture.

7. **The North Carolina Cottonseed-Crushers Association** offers to 4-H Club members the following one-year scholarships:
(1) To the member making the best record in the Baby-Beef contest.
(2) To the member making the best record in a dairy project.
(3) To the member making the best Pig Club record.

8. (1) **The Chilean Nitrate Educational Bureau** offers a four-year scholarship to the 4-H Club member in North Carolina making the best record for three or more years in 4-H Club work.

(2) **The Chilean Nitrate Educational Bureau** also offers a hundred scholarships of $5 each: one to the most distinguished Club boy from each of the hundred counties of North Carolina attending the 4-H Summer Short Course at State College.

9. **The Pieters Memorial Graduate Scholarship** commemorates the life and work of Dr. Adrian J. Pieters, long a leader in agriculture and a pioneer in the development of lespedeza. It was initiated by his wife, Mary Burr Pieters, to carry forward through graduate study his work with lespedeza and other acid-tolerant legumes. The annual stipend is $200.

10. **Graduate Fellowships** are offered each year by State College, during the current year, thirty three teaching, twenty-four research fellowships. As the number of these scholarships is limited, application should be made early to the Head of the Department concerned.

11. As need arises, assistants in various Departments are selected from upperclass or graduate students.

STUDENT ACTIVITIES

Student Government

Student Government, in accordance with an agreement between the students and the Board of Trustees of the College, undertakes "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 the student body."

The Student Council, the legislative-executive body for Student Government, is composed of one senior, one junior, and one sophomore from each of the Schools Agriculture and Forestry, Engineering, and Textile, and the Division of Teacher Education—and one member chosen at large from the freshman class at the beginning of the second term.

For guidance in its operation, the **Constitution and By-Laws for Student Government** has been adopted.

Student Assembly

As an experiment and as a supplement to the Student Council, there has been initiated at North Carolina State College a legislative branch of the Student Government. This Student Assembly was originated in January 1940 for the purpose of widening the scope of Student Government by giving better representation in the determining of campus policies.

The Assembly is modeled after our own State Legislature, with a Senate and a House of Representatives. The Senate is composed of the Student Council and the Student Welfare Committee. The House of Representatives is composed of one representative from each social fraternity and from one to two men from each floor of all dormitories. The total number of students in the Assembly is nearly one hundred and fifty. Meetings are held monthly, usually in the State Capitol.

Student Publications

The Publications Board is composed of the editors and business managers of all student publications, the president and the past president of the junior class, the president of the Student Council, and five faculty members. The Board seeks to promote the interests of the College and of the publications, to insure coöperation between the publications, and to hold the loyal support of the faculty, the students, and the public.

The Technician, the student newspaper, is delivered to each student's mail box exery Friday morning of the regular College session. The charge for the paper is included in the student's publications fee.

The Agromeck is the official annual published at the end of each scholastic year of the College. A copy of **The Agromeck** is also paid for by each student in his publications fee.

The Wataugan, issued twice each term, is "a strictly humorous magazine." The student's publications fee covers his charge for it.

The Agriculturist, a monthly magazine in its field, was begun by the activities of the Alpha Zeta fraternity and the "Ag" Club. All students of the School of Agriculture and Forestry are concerned in this enterprise.

The Southern Engineer, the organ of the School of Engineering, is managed by the Board of Directors of the Southern Engineer. They plan to issue four numbers during the regular College session.

Pi-ne-tum is the annual of the Division of Forestry. Its contents constitute a record of persons, specially the graduating class, and of events of the year interesting to students of the Division and their friends.

The Textile Forum is published quarterly by the students in the **Textile** School.

Clubs and Societies

All clubs and societies endeavor to bring together students, several including members of the faculty, with the same interests or professional objective, in order to cultivate close personal relations and fellowship. Their

chief purpose is to inculcate high professional consciousness and *esprit de corps;* and, with a view toward the accomplishment of these ends, they afford to members an opportunity to hear and to participate in discussions of professional problems, and themselves to present papers on current technical topics.

The Agricultural Club, besides the usual activities, sponsors the Agricultural Fair and an annual "Barn-Warming."

The Forestry Club, having the usual program through the year, publishes its own annual, *Pi-ne-tum.*

La Société des Beaux Arts includes students in Architectural Engineering and those in Landscape Architecture.

The Agricultural Engineering Club is a student branch of the national organization, The American Society of Agricultural Engineers, and brings together students of this department to discuss all phases of their specialty.

The Agricultural Education Society devotes its attention to matters of interest to students who are preparing to become teachers of agriculture.

Student Chapters in Engineering at State College represent the following national organizations:

The American Ceramic Society
The American Institute of Chemical Engineers
The American Society of Civil Engineers
The Associated General Contractors of America
The American Institute of Electrical Engineers
The National Society for the Advancement of Management
The American Society of Mechanical Engineers
The Institute of Aeronautical Sciences

Theta Tau, National Professional Engineering Fraternity, Rho Chapter, at State College, has a membership exceeding two hundred.

The Engineers' Council, composed of three students and a professor from each Department of the School of Engineering, publishes quarterly *The Southern Engineer* and sponsors the Engineers' Fair and Exposition.

The Tompkins Textile Society endeavors to keep abreast of whatever affects the textile industry, state, national, or foreign. For this society, the event of the year is the Textile Institute and Style Show.

The International Relations Club, including faculty and student members, seeks to arouse intelligent and active interest in national and foreign affairs.

The Monogram Club has as its purpose to develop the highest order of sportsmanship in all athletics.

State College Life-Saving Corps, affiliated with the Red Cross, is interested in ways to accomplish the worthy ends indicated by its name.

Honor Fraternities and Societies

Honor Fraternities and Societies strive to encourage and reward high attainment in scholarship and character, and to instill lofty professional

ideals, with leadership in contribution to existing knowledge and in service as prime objectives. The following national fraternities and societies have chapters or other organizations at State College:

Alpha Zeta: Agricultural
Eta Kappa Nu: Electrical Engineering
Gamma Sigma Epsilon: Chemical
Kappa Phi Kappa: Teaching
Keramos: Ceramic Engineering
Lambda Gamma Delta: Agricultural Judging
Mu Beta Psi: Musical
Phi Eta Sigma: Freshman, Scholarship
Phi Kappa Phi: Scholarship; Character
Phi Psi: Textile
Pi Kappa Delta: Public Speaking
Sigma Pi Alpha: Language
Tau Beta Pi: Engineering
Upsilon Sigma Alpha: Army
Blue Key: Scholarship, Leadership, Student Activities
Scabbard and Blade: Military; Reserve Officers Training Corps
Xi Sigma Pi: Forestry, Honorary.

The following are organizations peculiar to State College:

The Golden Chain: Senior Citizenship
The Order of St. Patrick: Senior Engineering; Collegiate and Personal Distinction
The Order of 30 and 3: Sophomore Leadership
The Pine Burr Society: Scholarship and Extracurricular Activity
Sigma Tau Sigma: Textile Scholarship

Social Fraternities

Following are the national Greek-Letter Fraternities having chapters at State College. Each chapter has in the vicinity of the Campus its own house.

Alpha Gamma Rho
Alpha Kappa Pi
Alpha Lambda Tau
Delta Sigma Phi
Kappa Alpha
Kappa Sigma
Lambda Chi Alpha
Phi Kappa Tau
Pi Kappa Alpha
Pi Kappa Phi
Sigma Alpha Mu
Sigma Nu
Sigma Phi Epsilon
Sigma Pi

The Interfraternity Council, composed of two representatives from each chapter, has as its purpose to advance the interests of North Carolina State College; to promote the general interests and welfare of the associated fraternities as a body; and to insure coöperation between them in their relations with the faculty, the student body, and the public in general.

MEDALS AND PRIZES

1. **The Alpha Zeta Cup** is awarded to the sophomore in Agriculture who during his freshman year made the highest scholastic average.

2. **The General Alumni Association of the College** presents annually a trophy to the member of the graduating class who during his College course has most distinguished himself in athletics.

3. **The American Institute of Chemical Engineers** presents annually its award to the sophomore who during his freshman year made the highest scholastic record.

4. **The Associated General Contractors of America Prize** is awarded each year by the Carolina Branch of this organization to the member of the graduating class in Construction Engineering who during his sophomore, junior, and senior years has made the highest scholastic record.

5. **The Elder P. D. Gold Citizenship Medal**, founded by the late C. W. Gold in memory of his father, and continued by his son, C. W. Gold, Jr., of Greensboro, North Carolina, is awarded annually to the member of the graduating class who during his sophomore, junior, and senior years has most distinguished himself in Student Citizenship. The qualities determining the award —scholarship, student leadership, athletics, and public speaking—are to be attested by the College Registrar, the Student Council, the Faculty Athletic Committee, and a committee composed of the Dean of Administration and Dean of Students.

6. **The Moland-Drysdale Corporation Scholarship Cup**, presented by Mr. George N. Moland, of Hendersonville, North Carolina, President of the Corporation, is awarded annually to the freshman in Ceramic Engineering who during the two terms preceding Scholarship Day, has the highest scholastic record together with interest shown in the activities of the Department.

7. **The J. C. Steele Scholarship Cup**, presented by J. C. Steele and Sons, of Statesville, North Carolina, to commemorate the establishment by Mr. Steele of the first plant for the manufacture in the South of ceramic machinery, is awarded annually to the student of the three upper classes in the Department of Ceramic Engineering who has made during the three terms preceding Scholarship Day the highest scholastic record. In making the award, personality and interest in the activities of the Department are considered.

8. **The Sigma Tau Sigma Cup** is awarded annually to the senior in Textiles who has the highest scholastic record.

9. **The Textile Colorist Medal** is awarded annually to the senior who presents the best thesis on some subject in Textile Chemistry and Dyeing.

10. **The National Association of Textile Manufacturers Medal** is awarded annually to a senior in the State College Textile School. The award is based upon conditions outlined by the National Association.

11. **Phi Kappa Phi**, Honor Scholarship Society, awards each year a gold medal to the senior who as a junior, a silver medal to the junior who as a sophomore, and a bronze medal to the sophomore who as a freshman, made, respectively, the highest scholastic record.

PHYSICAL EDUCATION AND ATHLETICS

Professor J. F. Miller, Head

Assistant Professor C. G. Doak, Physical Education and Intramurals.
Assistant Professor R. S. Warren, Physical Education, Assistant Coach Football and Head Coach Basketball.
Assistant Professor E. M. Waller, Physical Education, General Athletic Assistant.
J. L. VonGlahn, Business Manager Athletics.
Dick Herbert, Director Athletic Publicity.
Williams Newton, Head Coach Football and Baseball.
Herman Hickman, Assistant Coach Football and Head Coach of Wrestling and Track.
W. A. Woods, Assistant Coach Football.
R. W. Green, Head Coach Tennis.
L. W. Seegars, Assistant Coach Tennis.
C. R. Lefort, Head Coach Swimming.
C. N. Carroll, Custodian of Gym and Athletic Equipment.

Aims. In general, the Department aims are: (a) to promote a higher standard of physical fitness through "big muscle" activities; (b) to develop habits, knowledge, appreciation, and skills in desirable sports, and athletic and gymnastic procedures; (c) to develop habits of safe recreative activities to continue after graduation.

Organization. The Department of Physical Education and Athletics is in the Basic Division of the College. The program of service has three sections: Physical Education, offered in various curricula, for which college credit is given; Intramural Activities, for every interested student in the College; Intercollegiate Athletics, representative of the College.

Control.—All activities of the Department are controlled by the College. Physical Education and Intramural Activities are under the supervision of the Dean of the Basic Division. Intercollegiate Athletic Activities are under the supervision of the Athletic Council. The Head of the Department seeks balance and coördination in the work of the three sections. He delegates the work of the staff and sees that policies of the Department are carried out by them. To the Business Manager of Athletics is delegated the responsibility for business, financial, and all other details connected with intercollegiate contests. The members of the staff are expected to give reasonable and capable assistance in any work of the Department insofar as it does not interfere with their main specialization. They are responsible to the Head of the Department for carrying out their duties.

Buildings and Fields. The Department of Physical Education and Athletics is quartered in the Frank Thompson Gymnasium. An attractive feature of the gymnasium is a white tiled swimming pool and natatorium, with modern filter and chlorinating systems. The new Field House, located at the south end of Riddick Stadium, is the headquarters of the football

squad. Offices of the football coaching staff are located in this building. Riddick Stadium, with new concrete bleachers, seats 15,000 spectators. Freshman Field, adjacent to the Gymnasium, is used for freshman football, intramural games, physical-training classes, and varsity baseball. The new quarter-mile track, with its 220-yard straightaways, is located south of the Freshman Field. It has concrete stands seating about 3,000 spectators. "Red Diamond" and "1911 Parade Field" are available for intramural contests. The College has ten excellent clay tennis courts, with some additional contemplated.

Activities.—The College requires all students to enroll in some type of physical activity for two years, or six full terms. The classes meet twice a week, one term credit being given for each term's work. All students are required to take a physical and a medical examination at registration. Those who are subnormal in any way are placed on the recall list. Students may receive free medical advice at any time. All freshmen are required to take the course in Health Education which meets once a week for one term. Instruction in personal hygiene is given by members of the Physical Education Staff. A swimming requirement is also made for all freshmen, which must be met before graduation.

The required physical training courses are so standardized that they are presented, instruction given, and examination required of each student on the same basis as all other college courses. Students having physical defects which would interfere with their meeting the regular class requirements are placed in a restricted group activity. In general, the physical training activities fall in one of the three groups: (a) those developing individual physical efficiency, (b) those affording combative contests, (c) those occupying recreative or leisure time. Work for the most part is prescribed for freshmen; election of activities is permitted sophomores.

Intercollegiate Athletics.—North Carolina State College is a member of the Southern Conference, and subscribes to its rules of eligibility for all intercollegiate contests. The program consists of the organization and training of representative varsity and freshman teams in the following sports: football, basketball, baseball, track, cross country, wrestling, boxing, swimming, tennis, golf, and rifle competition.

Intramural Athletics. Activities are fostered and promoted in many lines of athletic sports for the student body. Meets, tournaments, and leagues are seasonably organized in twelve separate sports. Participation in these activities is purely voluntary; it does not receive College credit. Sports used in this program are correlated with those used in the required class work in Physical Education. Instruction in the sports is given in the class work, and opportunity for competition is provided in the intramural program. Cups, shields, and trophies are awarded winners in these competitions.

MUSIC

Christian D. Kutschinski, Director

Students with previous musical experience are encouraged to continue their musical activities in campus musical organizations for which they can qualify. Qualified musicians may enroll in the R.O.T.C. Band for their required military training.

The 80-piece **R. O. T. C. Band** and 50 piece **Drum-and-Bugle Corps** furnish martial music for all military parades by the R. O. T. C. Regiment.

The 90-piece **Red-Coat Band** plays and marches at all the football games, and at other campus and civic functions. Its membership comprises select R. O. T. C. and non-R. O. T. C. bandsmen, who receive training in the fundamentals of a marching band together with the R. O. T. C. Band, but devote some additional time in preparation for special programs.

The band is subdivided into smaller units which alternate in furnishing music at pep meetings, basketball games, and on other such occasions.

The Concert Band, composed of 60 of the most proficient musicians on the campus, concentrates on the study and performance of the finest in band-concert music. Its activities have greatly increased the cultural growth of those participating, and have done much toward increasing appreciation of music on the campus and in the community, in addition to providing wholesome entertainment.

The Drum-and-Bugle Corps, besides functioning as a separate unit, is also combined with the band on certain occasions, giving State College a marching musical unit of 140 men, in red and-white uniforms, acquired by contributions from students and faculty, and from interested citizens of Raleigh through the untiring efforts of The American Legion and the Junior Chamber of Commerce.

Credit.—Juniors and seniors in the band who are not enrolled in the advanced course R. O. T. C. may obtain three term credits per year for Band when approved by the Director before registration.

The Concert Orchestra is augmented by a number of the best musicians in Raleigh to round out the instrumentation to that of symphonic balance. Besides preparing concert programs, the orchestra is divided into smaller units to provide music of a lighter nature for numerous College functions.

The Men's Glee Club rehearses three times a week, and alternates with the orchestra and bands in giving concerts throughout the year. It has proved to be a very popular extracurricular activity, and the group is in demand for concerts out of town and at civic functions in addition to those on the campus.

A Male Quartet and small **Chamber Music** ensembles are encouraged.

COLLEGE PUBLICATIONS

State College Record carries results of research and special studies by members of the faculty and, in the April issue, the annual **Catalog** with announcements for the following year.

Agricultural Experiment Station publishes many bulletins of research conducted by the staff. These are sent on request, free to anyone in the State.

Agricultural Extension Service issues circulars of practically useful information on various home and farm problems. A list of those available or any circular available is sent on request, free to citizens of the State.

The College publishes the results of experimental and research projects made by the **Engineering Experiment Station** and Engineering Departments of State College. Information concerning these publications may be obtained from the Director of the Engineering Experiment Station.

HEALTH OF STUDENTS

The authorities of the College strive to protect the health of students in every way. Each student is given a thorough physical examination when he enters the College. If remedial defects are discovered, such as defective tonsils or eyes, he is advised to have these defects corrected. If the defect is such that it may be corrected by exercise, the student is placed in a special class under the supervision of the Director in the Physical Education Department of the College.

The Infirmary, maintained by the College, has accommodations for thirty five bed patients. There is a staff of five: the College Physician, a Supervising Nurse, an Assistant Nurse, a Night Nurse—all graduates of Class-A Hospitals and a Laboratory and X Ray Technician.

A modernly equipped First Aid Department, and a Laboratory and X-Ray Department are valuable features of the Infirmary.

The College Physician visits the Infirmary regularly once daily and more often when necessary. The Infirmary is never closed. A graduate nurse is on duty day and night. Students have free access to the Infirmary at all times.

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

The medical fee provides for students' infirmary service, general medical treatment, and the services of nurses. It does not provide for surgical operations, outside hospital care, or the services of dentists or any other specialist.

THE GENERAL ALUMNI ASSOCIATION

Alumni Organization. The purpose of this organization is to promote the interests of State College and to foster among its former students a

sentiment of regard for one another, an attachment to their Alma Mater, and the ideals of service to their fellow men; to interest prospective college students in the kind of training given at State College and in the advantages which young men who are graduates of schools of science and technology have in the fields of useful employment.

The annual business meeting of the General Alumni Association is held during the Commencement each year. Officers of the General Alumni Association, members of the Alumni Executive Committee, members of the Alumni Loyalty Fund Council, and alumni representatives on the Athletic Council are elected at the annual meeting.

Class reunions are held each year in connection with the annual meeting of the Association. These reunions are scheduled so that each class has a reunion the first year, and subsequently, every five years after graduation.

State College Clubs. Local Clubs of the General Alumni Association may be organized wherever there is sufficient interest to justify a club. At present, there are 28 clubs in North Carolina and 13 clubs outside the State.

The Alumni Office. Records of both graduates and nongraduates are kept by the Alumni Office. The master file includes information on all former students; other files are arranged geographically and by classes. Biographical files are also kept on all graduates.

Serving as a medium of communication between alumni and the College, the Alumni Offices, located on the second floor of Holladay Hall, are official headquarters for alumni when they visit the campus.

The Alumni News. The ALUMNI NEWS is published monthly except July, August, and September, by the General Alumni Association. The purpose of this publication is to keep alumni in touch with the College and with each other. The magazine is edited by the Alumni Secretary.

THE D. H. HILL LIBRARY

Harlan Craig Brown, Librarian.
A.B., B.S. in L.S., University of Minnesota; A.M. in L.S., University of Michigan.

Mrs. Reba Davis Clevenger, Reference Librarian.
B.L.S., University of Illinois.

Miss Christine Coffey, Catalog Librarian.
A.B., University of North Carolina; A.B. in L.S., University of Michigan.

Cloyd Dake Gull, Periodicals Librarian. On leave of absence.
A.B., Alleghany College; A.B., A.M. in L.S., University of Michigan.

Robert Mitchell Lightfoot, Jr., Circulation Librarian.
B.S., N. C. State College; M.S., University of Virginia; B.S. in L.S., Syracuse University.

Mrs. Mary Faucette Poole, Assistant Cataloger.
B.A., Duke University; B.S. in L.S., University of North Carolina.

Miss Emma Mae Robinson, Assistant in Circulation Department.

Miss Anne Leach Turner, Order Librarian.
A.B., University of North Carolina;
B.S. in L.S., Columbia University.

Miss Anna Elizabeth Valentine, Periodicals Librarian.
B.S., N. C. State College; A.B. in L.S., University of North Carolina.

Beginning.—The library dates from December, 1889, when $500 was appropriated for the purchase of books as the nucleus of a library. From 1889 to 1903, the library was housed on the second floor of the Administration Building. Upon the completion of Pullen Hall, larger quarters on the first floor of that building were occupied. The library remained in Pullen Hall until 1926, when it was moved into its present building.

Technical, First. Realizing that experience in the use of books is an essential part of the training of agriculturist, engineer, industrialist, and scientist, the College is striving to build strong, well-balanced collections in the degree-giving Departments, supported by adequate material in supplementary fields. To this end, the library is planned primarily to supply the study and research needs of the students and staff of the College. Its facilities, however, are available to all residents of the State for use within the library building. Technical materials not available from the North Carolina Library Commission may be obtained from the State College Library through the agency of the Library Commission or through interlibrary loan channels.

Inclusive. The library collection includes all books and periodicals belonging to the College. The total number of cataloged volumes is approximately 60,000, exclusive of a large number of publications of the Federal Government, the State Agricultural Experiment Stations, the State Extension Divisions, the Engineering Experiment Stations, and the agricultural departments of many foreign countries. More than 800 periodicals and newspapers are received currently.

Facilities.—The library contains two reading rooms with a minimum seating capacity of 164. The larger room is used for study. It contains a collection of encyclopedias, dictionaries, standard reference books in the different fields of study, and the current issues of periodicals and newspapers. The Reference Desk, where general and technical reference questions are answered, is conveniently located here. The smaller room, with a seating capacity of about twenty, is used for recreational reading. It is comfortably furnished and has a collection of the best fiction and non-fiction of general interest.

Instruction.—Through use of the Freshman English classes, elementary instruction in the use of the library is given during the fall quarter to all new students. This instruction includes lectures, and problems in the use of the card catalog, magazine indexes, and reference books.

YOUNG MEN'S CHRISTIAN ASSOCIATION

Board of Directors

M. E. GARDNER, *Chairman*

E. L. Cloyd
David A. Worth
L. L. Vaughan
John A. Park
C. K. McAdams, Ex Officio
F. B. Wheeler
A. D. Stuart
D. A. Lockmiller
B. F. Brown
C. D. Umberger, Ex-Officio

Employed Staff

EDWARD S. KING, General Secretary
N. B. WATTS, Assistant Secretary
MRS. L. W. BISHOP, Office Secretary

Student Organization

The Student Cabinet

The cabinet is composed of the four officers of the association, President, Vice-President, Secretary, and Treasurer and the chairmen of all standing committees. The officers are elected annually by ballot. The committee chairmen are appointed by the President. The cabinet is in charge of the program of the association. The President and Treasurer are ex officio members of the Board of Directors.

The objective of the Young Men's Christian Association is to help contribute whatever is lacking in the total educational situation to make the principles and the spirit of the Christian religion effective in personal life and in all social relations.

The Y. M. C. A. Building is the social and religious center of the campus. On the basement floor are a recreation room, a guest room, a barber shop, and the Student Supply Store. There is a spacious lobby, an auditorium, a reception room, a dining room, the self-help office, and the service office on the first floor. The second floor provides space for the Faculty Club, a Conference Room, a committee room, the Y. M. C. A. Cabinet Room, and the office of the General Secretary.

The student-employment service is directed by the Assistant Secretary of the Association. Approximately five hundred and fifty students obtain part-time work through the Y. M. C. A. in the course of a year.

Student and faculty organizations of all kinds use the facilities of the building for meetings and social gatherings, entertainments and lectures.

The Y. M. C. A. program, directed by the Student Cabinet, includes, with other features not mentioned, work for new students; organizing a Freshman Cabinet; planning socials with the students from nearby women's colleges; bringing to the campus eminent men to speak on such topics as men-and-women relations, and present day international, racial, and economic

questions; conducting an annual religious-emphasis week under the leadership of Christian ministers or laymen who understand student life; sending delegates to State, regional, and National Christian Student Conferences; issuing annually **State College Handbook**, a compendium of extracurricular activities on the Campus, specially those of students, with the personnel of each organization for the year.

MILITARY TRAINING

The Military Department: The Reserve Officers Training Corps

The Reserve Officers Training Corps, the official designation of the military organization at State College, conducts the work in two courses of two years each:

The Basic Course.—A required course for all physically fit freshmen and sophomores.

The Advanced Course. Elective and selective for juniors and seniors who have successfully completed the Basic Course. Satisfactory completion of the Advanced Course leads to a commission as Second Lieutenant of Infantry in the Officers Reserve Corps. Students holding such a commission are assigned, after graduation, to an Army Reserve Unit, usually in their own localities. Coöperative Engineering Students selected for Advanced Military Training are required to enter classes in the Fall.

Military Science I discusses in class such subjects as: the National Defense Act, Military Courtesy and Discipline, Hygiene and First Aid, Military Organization, Current International Situation, and Military History. One hour per week is devoted to classroom instruction.

Military Science II discusses Leadership, Scouting and Patrolling, Combat Principles of small units, Interior Guard Duty, and Military History. One hour per week is devoted to classroom instruction.

Military Science III discusses Leadership, Aerial Photography, Supply and Mess Management, Operation of Motor Vehicles, Defense against Chemical Agents, Combat Principles and Defensive Tactics. Three one-hour classroom periods are required.

Military Science IV discusses Leadership, Military Law, Military History, Anti-Aircraft Defense, Infantry Weapons and Unit Organization, Combat Intelligence and Signal Communications. Three one-hour classroom periods are required.

Drill.—All ROTC students are required to attend three one-hour drill periods per week.

Uniforms, Equipment, Fees

Army Officers.—The Federal Government details officers of the Army as Instructors in the R. O. T. C. The senior instructor is designated by

the War Department as Professor of Military Science and Tactics. Regular Army and/or Reserve officers conduct all classroom instruction and supervise the instruction of the corps on the drill fields.

Uniforms. Uniforms for Basic Course students, and all instructional equipment are provided by the Federal Government. These are loaned to the Institution, which is accountable to the Federal Government for their proper care and use.

Financial Aid.—Members of the Advanced Course are paid a specific amount by the Federal Government. Each member is required to purchase necessary uniforms, textbooks, military shoes, and other pertinent items. Payment for these items should be made in advance at the Treasurer's Office and credited to Military Stores. If credit is desired, a charge of 20% must be made to meet carrying charges and forfeitures of dealers' discounts.

The uniforms are made in the pattern of the Army Officers' uniform and can be used by the student for several years after he has received his commission in the Reserve Corps. In addition, the Advanced Course student receives from the Federal Government a daily pay amounting to approximately twenty five cents per day. An Advanced Course student who withdraws from College prior to graduation must adjust his uniform account with the Military Department prior to departure from the Campus.

Deposit.—A deposit of ten dollars is required of each student member of the Basic Course of the R. O. T. C., as insurance against loss of equipment or damage thereto. A refund is made upon the return of the equipment in good condition.

Expenses. Approximately $8.25 is required by each new student in the R. O. T. C. for the purchase of uniform shoes and other special articles not issued by the Government. Expenses for sophomore R. O. T. C. students may be less, dependent upon the serviceability of items purchased previously.

Organization.—The R.O.T.C. at State College is organized into the following units:

The First Infantry Regiment of three battalions and the **Second Infantry Regiment** of one battalion organized for military training.

A Military Band, supervised and trained by the Director of Music of the College. Instruments are provided by the Federal Government. Membership is open to all student musicians who can qualify. Time is given for instruction in concert music in addition to military-band music.

A Military Drum-and-Bugle Corps, supervised and trained by cadet officers. Instruments are provided by the Military Department.

Credit.—Credit is allowed for work at other institutions having an R. O. T. C. Unit established in accordance with the provisions of the National

Defense Act and Army Regulations. Record of a student's prior training in R. O. T. C. is obtained by the Military Department from the institution concerned.

Educational Value.—The immediate purpose of the R.O.T.C. is to train officers for service in defense of the country in an emergency. This is clearly stated in the National Defense Act of Congress. The R. O. T. C. at State College is in no sense militaristic. As a by-product, the general educational value of the training for any profession in civil life is of incalculable greatness. Military discipline best instills the principle that to be a leader or to command one must first learn to obey. The training gives the advanced course student ample opportunity to practice the leadership of men resulting in self-confidence, initiative, and courage. Habits of regularity, of punctuality, of thoroughness in every duty, of respect for one's seniors are inculcated, along with neatness in dress and cleanliness in person. The importance of correct posture and bearing in social and business intercourse, as well as for health, is implanted.

The standard of discipline desired by the Military Department is exactly the same as the standard most helpful to fit college graduates to become honorable and leading members of their communities, in whatever profession or calling they may engage.

III. SCHOOLS, DIVISIONS AND DEPARTMENTS

THE BASIC DIVISION

Benjamin Franklin Brown, Dean

Organization. Upon recommendation by President Graham, the Basic Division of the College was created by action of the Board of Trustees at its annual meeting on June 11, 1935. After considerable preliminary preparation, the organization of the Division became effective July 1, 1937, the first students being registered in the Division in September, 1938. For the first year it seemed advisable to include only the incoming freshmen. Beginning with the College year 1939 40, all freshmen and sophomores in the College are registered in the Basic Division.

Within its administration, the Basic Division includes the Departments of Economics, English, Ethics and Religion, History and Political Science, Modern Languages, Physical Education, and Sociology. The Heads of the Departments, or representatives from them, constituting **the Administrative Board of the Division,** together with the members of the several Departments are as follows:

Economics

Associate Professor C. B. Shulenberger, Administrative Board Representative

Professors B. F. Brown, R. O. Moen, M. C. Leager; Associate Professors R. W. Green, T. W. Wood; Instructor L. J. Arrington.

English

Professor Lodwick C. Hartley, Head of the Department

Professors J. D. Clark, T. P. Harrison, A. I. Ladu; Associate Professors A. M. Fountain, E. H. Paget; Asssitant Professors F. H. Lyell, R. P. Marshall, T. L. Wilson, W. K. Wynn; Instructors K. W. Cameron, C. C. Chadbourn, Philip H. Davis, H. T. Gibson, H. G. Kincheloe, A. N. Kruger, J. A. Shackford, A. B. R. Shelley, R. B. Wynne.

Ethics and Religion

Associate Professor W. N. Hicks, Head of the Department

History and Political Science

Professor, David A. Lockmiller, Head of the Department
Associate Professor, L. W. Barnhardt
Assistant Professors, George Bauerlein, Jr., L. Walter Seegers.

Modern Languages

Professor L. E. Hinkle, Head of the Department
Assistant Professor S. T. Ballenger; Instructor I. O. Garodnick.

Physical Education and Athletics

Professor J. F. Miller, Head of the Department
For names of Physical Education staff and athletic coaches see page 34.

Sociology

Professor Sanford R. Winston, Head of the Department

The Faculty of the Division

The faculty is composed of the staff members of the Departments named above and, in addition, the teachers of freshmen and sophomores from the Departments of Botany, Chemistry, Geology, Mathematics, Physics, Psychology, and Zoölogy.

Purposes.—Broadly speaking, the purposes of the Basic Division are (a) to provide the best possible preliminary training during the first two years of the student's college career so that he can during the last two years successfully pursue his professional education in agriculture and forestry, engineering, textiles, or vocational education; and (b) to provide effective guidance during the first two years, so that those students with well-chosen and fixed purposes can be well-advised in their educational careers, and also so that those students who have made an unsatisfactory choice of curriculum or who have become uncertain of their careers, may receive helpful guidance and advice in finding themselves.

More specifically it is the function of the Basic Division:

First, to provide "two years of basic courses in the humanities, natural and exact sciences, and the social sciences as the foundation of the schools of agriculture and forestry, textiles, and engineering;"[1]

Second, "to provide in the curricula of the upper years of each technological school for a minimum of the more general culture courses in the humanities, natural sciences, and social sciences."[2]

Student Guidance. In carrying out its guidance program, the Basic Division avails itself of numerous tests which indicate the past achievements and the present rate of progress of its students. Upon entering, all freshmen take the placement tests in Mathematics and in English, and the psychological examination. In addition to these, the advisers have the use of mid-term reports on all students, the final examination record, the dormitory reports, and the record from the Dean of Students.

Each student is assigned to a technical adviser in the curriculum in which he is registered, to assist him in planning for his professional career. Students whose records indicate that they are not qualified for the curriculum they have chosen, or who become dissatisfied with their course, are assigned to guidance counselors for special assistance.

---

[1] President Graham's Report to the Board of Trustees, June 11, 1935, page 11.
[2] Ibid.

Promotion.—A student is promoted from the Basic Division upon earning with an average grade of at least C not fewer than 105 credits, including all of the work prescribed in his freshman year.

Those promoted may procure Certificates of Promotion upon application to the Dean of the Basic Division.

Student Loads. It is the policy of the Basic Division and the purpose of its scholarship rules to encourage students to take such a number of credit hours each term as they can carry well, depending upon previous preparation, ability, self-help duties, health, etc. With few exceptions, each student starts the first term of his first year with a normal average load; those who do exceptionally well are encouraged to make as good progress as possible by adding hours up to their capacity, while those whose records indicate lack of ability from any cause are urged to reduce their loads to a point where they can do work of a creditable quality. Judgment as to the load that a student should take in any term is based upon previous demonstration of scholarship.

Special Testing Service is provided by the Department of Psychology in order to assist advisers and counselors in the guidance of students. In addition to the tests given to all freshmen already referred to, provisions are made for testing individual students who present special problems for study. The "testing service" rendered by the staff in Psychology administers tests for aptitudes, personality, interests, and educational achievement. Efforts are being made to provide a clinical approach to a study of the educational, vocational, and personality problems of individual students.

PROGRAMS OF STUDY

Programs of Study.—The Basic Division grants no degrees. It provides two years of fundamental training in preparation for the special training of the last two years in the other divisions of the College:

The School of Agriculture and Forestry
The School of Engineering
The Division of Teacher Education
The Textile School

Its programs of study are as follows:

AGRICULTURE AND FORESTRY

Majors in:

Agricultural Economics	Field Crops	Poultry Science
Animal Production	Floriculture	Soils
Dairy Manufacturing	Plant Pathology	Vegetable Gardening
Entomology	Pomology	

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra and Trigonometry, Math. 111, 112	0	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Gen. Zoology, Gen. Botany, Phys. Geology, Zool. 101, Bot. 102, Geol. 120	4	4	4
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Gen. Poultry, Anim. Nutrition, Gen. Horticulture, Poul. 201, A. H. 202, Hort. 203	3	3	3
Prin. of Forestry, Farm Equipment, Gen. Field Crops, For. 111, Agr. Eng. 202, F. C. 202	3	3	3
Gen. Botany, Econ. Zoology, Soils, Bot. 101, Zool. 102, Soils 201	4	4	4
Physics for Ag. Students, Int. to Org. Chemistry, Animal or Plant Physiology, Phys. 115, Chem. 221, Zool. 202 or Bot. 221	5	4	5
General and Agr. Economics, Econ. 201, 202, Agr. Econ. 202	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in Agricultural Chemistry

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra and Trigonometry, Math. 111, 112	0	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Gen. Zoology, Gen. Botany, Phys. Geology, Zool. 101, Bot. 102, Geol. 120	4	4	4
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Qualitative and Quantitative Analysis, Chem. 211, 212, 233	4	4	4
Gen. Botany, Econ. Zoology, Animal or Plant Physiology, Bot. 101, Zool. 102, Zool. 202, or Bot. 221	4	4	5
Soils, Bacteriology, Anim. Nutrition, Soils 201, Bot. 402, A. H. 202	4	4	3
General and Agr. Economics, Econ. 201, 202, Agr. Econ. 202	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

Major in Agricultural Engineering

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
Business English, Public Speaking, Eng. 211, 231	3	0	3
Farm Equipment, Agr. Eng. 202	0	3	0
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Gen. Zoology, Gen. Botany, Engin. Geology, Zool. 101, Bot. 102, Geol. 220	4	4	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in Forestry

Composition, Eng. 101, 102, 103	3	3	3
Introductory Sociology, Soc. 202	3	0	0
Algebra and Trigonometry, Math. 111, 112	0	4	4
Drawing, C. E. 101, 102, 103	1	1	1
General Botany, Systematic Botany, Bot. 101, 102, 203	4	4	3
General and Economic Zoology, Econ. Entomology, Zool. 101, 102, 213	4	4	4
Elementary Forestry, For. 101, 102, 103	1	1	1
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Introduction to Economics, Land Economics, Econ. 205, Agr. Econ. 212	3	3	0
Introduction to Psychology, Psychol. 200	0	0	3
Plant Physiology, Physical Geology, Bot. 221, Geol. 120	5	4	0
Mathematics of Finance, Math. 113	0	0	4
Dendrology, Wood Technology, Bot. 211, For. 202, Bot. 213	3	3	3
Theoretical Surveying, C. E. 221, 222	0	3	3
Field Surveying, Topographical Drawing, C. E. 225, 224	0	1	1
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1
Surveying and Mapping, Dendrology, Mensuration, Silviculture, C. E. s300, For. s214, s304, s204	Summer		

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

Major in Landscape Architecture

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
General Botany, Systematic Botany, Bot. 101, 102, 203	4	4	3
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
Arboriculture, L. A. 101, 102, 103	1	1	2
Drawing, C. E. 101, 102, 103	1	1	1
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Business English, Public Speaking, Eng. 211, 231	3	0	3
Physical Geology, Plant Physiology, Geol. 120, Bot. 221	0	4	5
Introduction to Psychology, Introduction to Economics, Psych. 200, Econ. 205	3	3	0
Introduction to Architecture, Elements of Architecture, Arch. 201, 202, 203	3	3	3
Plant Propagation and Nursery Practice, Hort. 301	3	0	0
Landscape Design, L. A. 212, 213	0	3	3
Theoretical Surveying, C. E. 221, 222	3	3	0
Field Surveying, C. E. 225, 227	1	0	1
Woody Plants, L. A. 201, 202, 203	2	2	2
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1
Surveying, C. E. s310, 3 credits	Summer		

Major in Wildlife Conservation and Management

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra and Trigonometry, Math. 111, 112	0	4	4
Economic History, Hist. 101, 102, 103	3	3	3
General and Economic Zoology, Physical Geology, Zool. 101, 102, Geol. 120	4	4	4
Elementary Wildlife Management, Zool. 111	1	0	0
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Public Speaking, Eng. 231	3	0	0
Ornithology, Zool. 251, 252, 253	2	2	2
General Botany, Systematic Botany, Bot. 101, 102, 203	4	4	3
Principles of Forestry, General Field Crops, Introduction to Organic Chemistry, For. 111, F. C. 202, Chem. 221	3	3	4
Introduction to Economics, Land Economics, Econ. 205, Agr. Econ. 212	3	3	0
Physics for Agricultural Students, Phys. 115	0	0	5
Theoretical Surveying, C. E. 221, 222	3	3	0
Field Surveying, C. E. 225	1	0	0
Comparative Anatomy, Zool. 222, 223	0	4	4
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

ENGINEERING

Major in Aeronautical Engineering

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Mechanical Drawing, M. E. 211, 212, 213	2	2	2
Shopwork, M. E. 121, 122, 123	1	1	1
General Aeronautics, Engineering Mechanics, Aero. E. 210, E. M. 311, 312	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in Architectural Engineering

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231 and one, 261-267	3	3	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Pencil Sketching, Arch. 100	1	1	1
Elements of Architecture I, II, III, Arch. 201, 202, 203	3	3	3
Shades and Shadows, Arch. 205	2	0	0
Perspective Drawing, Arch. 206	1	0	0
Engineering Mechanics, E. M. 311, 312	0	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* Students who have been certified by the Department of English as proficient in English may substitute Modern Language for the courses listed.

Major in Architecture

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
French or Modern Language, M. L. 101, 102, 201 or equivalent	3	3	3
Pencil Sketching, Arch. 100	1	1	1
World History, Hist. 104	2	2	2
Architectural or Mechanical Drawing, Arch. 107 or M. E. 105, 106	3	3	0
Descriptive Geometry, M. E. 107	0	0	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Background for Modern Thought or Elective	3	3	3
Physics for Engineers, Phys. 201, 202	4	4	0
History of Sculpture, Arch. 325	0	0	2
Working Drawings, Arch. 305	0	0	2
Shades and Shadows, Arch. 205	2	0	0
Perspective Drawing, Arch. 206	1	0	0
Engineering Mechanics, E. M. 301, 302	0	3	3
Elements of Architecture, Arch. 201, 202, 203	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in Ceramic Engineering

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
*Business English, Public Speaking, English or American Literature, Eng. 211, 231, 261	3	3	3
Qualitative and Quantitative Analysis, Mineralogy, Chem. 211, 212, Geol. 230	4	4	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering Geology, Ceramic Materials, Ceramic and Mining Processes, Geol. 220, Cer. E. 102, 103	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* Students who have been certified by the Department of English as proficient in English may substitute Modern Language for the courses listed.

Major in Chemical Engineering

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Qualitative and Quantitative Analysis, Chem. 211, 212, 213	4	4	4
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Introduction to Chemical Engineering, Chem. E. 201, 202, 203	1	1	2
Shopwork, M. E. 122, 123	1	1	0
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in Civil Engineering

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
**Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering Geology, Engineering Mechanics, Geol. 220, E. M. 311, 312	3	3	3
Theoretical Surveying, C. E. 221, 222, 223	3	3	3
Field Surveying, C.E. 225, 227	1	0	1
Mapping, C. E. 226	0	1	0
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1
Surveying, C. E. s310. 3 credits	Summer		

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Elementary German, M.L. 103, 104, 203 or equivalent.

** Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Elementary French, M.L. 101, 102, 201 or equivalent.

Major in Electrical Engineering

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
General Economics, Econ. 201, 202, 203	3	3	3
Electrical Engineering Fundamentals and Metal Work, E. E. 201, 202, M. E. 128	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in General Engineering

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 Credits	Summer		
**English or Modern Language	3	3	3
Calculus I, II, III, Math. 201, 202, 203	4	4	4
Physics for General Engineering, Phys. 205, 206, 207	5	5	5
‡Electives	4	4	4
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* Students who have been certified by the Department of English as proficient in English may substitute courses in Modern Language for the courses listed.

** Students who do not make an average grade of B or better in Freshman English will be required to take English in the Sophomore year.

‡ Free electives, except that not more than 15 term credits out of a total of 48 term credits of free electives in this curriculum may be chosen from the technical or special technical courses in the School of Engineering.

Major in Geological Engineering

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Qualitative and Quantitative Analysis, Geomorphology, Chem. 211, 212, Geol. 223	4	4	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering and Historical Geology, Mineralogy, Geol. 220, 222, 230	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

Major in Industrial Engineering

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
**Business English, Public Speaking, English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
General Economics, Econ. 201, 202, 203	3	3	3
Shopwork, M. E. 124, 125, 126	2	2	2
Industrial Organization, I. E. 101, 102, 103	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Elementary French, M. L. 101, 102, 201.

**Students who have been certified by the Department of English as proficient in English may substitute Modern Language for the courses listed.

Major in Mechanical Engineering

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Engineering Drawing II, Descriptive Geometry, M. E. 105, 106, 107	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Surveying, C. E. s200, 3 credits	Summer		
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and one, 261-267	3	3	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Mechanical Drawing, M. E. 211, 212, 213	2	2	2
Shopwork, M. E. 124, 125, 126	2	2	2
Engineering Mechanics, E. M. 311, 312	0	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

TEACHER EDUCATION

For Teachers of Agriculture

Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Algebra and Trigonometry, Math. 111, 112	0	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Gen. Zoology, Gen. Botany, Phys. Geology, Zool. 101, Bot. 102, Geol. 120	4	4	4
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Gen. Poultry, Anim. Nutrition, Gen. Horticulture, Poul. 201, A. H. 202, Hort. 203	3	3	3
Prin. of Forestry, Farm Equipment, Gen. Field Crops, For. 111, Agr. Eng. 202, F. C. 202	3	3	3
Gen. Botany, Econ. Zoology, Soils, Bot. 101, Zool. 102, Soils 201	4	4	4
Physics for Ag. Students, Int. to Org. Chemistry, Animal or Plant Physiology, Phys. 115, Chem. 221, Zool. 202 or Bot. 221	5	4	5
General and Agr. Economics, Econ. 201, 202, Agr. Econ. 202	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* Students who have been certified by the Department of English as proficient in English may substitute courses in Modern Language for the courses listed.

For Teachers of Industrial Arts and Teachers of Industrial Education

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103 or optional science	4	4	4
Algebra, Trigonometry, Mathematics of Finance, Math. 111, 112, 113	4	4	4
Industrial Arts Drawing, Ed. (I. A.) 105a, b, c	3	3	3
Industrial Arts, Ed. (I. A.) 106a, b, c	3	3	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Business English, Public Speaking, English Elective, Eng. 211, 231	3	3	3
General Physics, Phys. 105, 106, 107	4	4	4
Economic History, Hist. 101, 102, 103	3	3	3
General Sociology, Soc. 202, 203	3	3	0
Industrial Arts Design, Ed. (I. A.) 205	0	0	3
Laboratory Problems in Industrial Arts, Ed. (I. A.) 206a, b, c	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

For Teachers of Occupational Information and Guidance

Composition, Eng. 101, 102, 103	3	3	3
Algebra, Trigonometry, Mathematics of Finance, Math. 111, 112, 113	4	4	4
Science, elective	4	4	4
Economic History, Hist. 101, 102, 103	3	3	3
General Sociology, Soc. 202, 203	3	3	0
Occupations, Ed. 103	0	0	3
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
Business English, Public Speaking, English Elective, Eng. 211, 231	3	3	3
General Economics, Econ. 201, 202, 203	3	3	3
History of the United States, Hist. 200, 201, 202	3	3	3
Science elective	4	4	4
*Electives	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

* To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, Social Science.

TEXTILES

Majors in Textile Manufacturing, Textile Chemistry and Dyeing, Yarn Manufacturing, Textile Management, Weaving and Designing.

Courses	Terms and Credits F	W	S
Composition, Eng. 101, 102, 103	3	3	3
Algebra, Trigonometry, Mathematics of Finance, Math. 111, 112, 113	4	4	4
Physics for Textile Students, Phys. 111, 112, 113	4	4	4
Shopwork, M. E. 121, 122, 123	1	1	1
Engineering Drawing I, M. E. 101, 102, 103	2	2	2
Textile Principles Laboratory, Tex. 101, 102, 103	1	1	1
Yarn Calculations, Cloth Calculations, Tex. 104, 131	0	1	2
†Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Cotton, Cotton Classing II, F. C. 201, 212	3	3	0
Decorative Drawing, Light in Industry, Arch. 106, Phys. 311	3	0	3
Knitting Laboratory, Tex. 207, 208, 209	1	1	1
Knitting I, Fabric Structure and Analysis, Tex. 211, 236, 237	2	2	2
Power Weaving, Tex. 234	0	2	0
Power Weaving Laboratory, Tex. 231, 232	1	1	0
Yarn Manufacturing, Tex. 205	0	0	3
Yarn Manufacturing Laboratory, Tex. 201, 203	1	0	1
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1

† Or six credits in one or two of the following departments: Economics, Ethics and Religion, History and Political Science, Modern Languages, Psychology, Sociology.

THE SCHOOL OF AGRICULTURE AND FORESTRY

Ira Obed Schaub, Dean and Director of Extension

Zeno Payne Metcalf, Director of Instruction

Leonard David Baver, Director of the Agricultural Experiment Station

Organization. The School of Agriculture and Forestry is organized in three divisions—Resident Instruction, Agricultural Extension and the Agricultural Experiment Station to carry on the functions of instruction, extension and research. These divisions are organized as departments as follows: (a) Agricultural Economics, including Farm Marketing and Farm Management; (b) Agricultural Engineering, including Farm Structures and Farm Machinery; (c) Agronomy, including Field Crops, Soils, and Plant Breeding; (d) Animal Industry, including Animal Production, Animal Nutrition, Dairy Production, and Dairy Manufacturing; (e) Botany, including Bacteriology, Plant Physiology, and Plant Diseases; (f) Chemistry; (g) Experimental-Statistics: (h) Forestry, including Silviculture, Utilization, and Management; (i) Horticulture, including Pomology, Small-Fruit Culture, Floriculture, Truck Farming, and Landscape Architecture; (j) Poultry Science, including Poultry Diseases, Poultry Breeding, Poultry Feeding, and Poultry Management; (k) Rural Sociology; (1) Zoölogy, including Genetics, Entomology, Animal Physiology, and Wild Life Management.

Purpose. The purpose of the School of Agriculture and Forestry is threefold: (1) To obtain through scientific research, experimentation, and demonstration accurate and reliable information relating to soils, plants, and animals, and to obtain from every available source reliable statistical, technical, and scientific data relating to every phase of agriculture that might be of advantage to the State; (2) to provide instruction in the 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; (3) to disseminate reliable information through publications and through extension agents, and by a wise use of this information to give instruction to agricultural workers 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 so organized that not only the subject matter for classroom instruction and extension work may be drawn from research, experimentation, and demonstration, but also that the students themselves shall have the opportunity to work under the direction of research specialists.

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

General Farming	Poultry Raising
Agricultural Extension Work	Manufacturing of Dairy Products
Agricultural Service in State or Federal Departments	Forestry
	Fruit Growing
Stock Raising and Dairying	Truck Farming

Agricultural Service 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; Advanced Standing. Regulations for admission and for advanced standing are stated under Information for Applicants. (See pages 23-28.)

Graduates in Liberal Arts.—Selected courses leading to the degree of 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 by 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 this degree.

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

A minimum of 230 term credits with at least 230 honor points is required for graduation by the School of Agriculture. The term credits should be distributed as follows: A maximum of 60 in the major Department, and a minimum of 18 in Language, 24 in Physical Science, 18 in Social Science, 12 in Military Science or alternative, and 6 in Physical Education.

Students entering with advanced standing are required, in 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 this School.

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 of State College after five years of service in agriculture, and upon the acceptance of a satisfactory thesis.

Curricula. The curricula in Agriculture offer a combination of practical and theoretical work. About half of the time is devoted to lectures and recitations, 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 rather than specializing too narrowly, and shall become a leader having breadth of vision, the curricula in Agriculture contain broadening subjects: language, literature, history, and the social sciences.
The School of Agriculture and Forestry offers the following curricula:

A. In General Agriculture with opportunities to specialize during junior and senior years in any of the following:

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

B. In Agricultural Engineering
C. In Forestry
D. In Landscape Architecture
E. In Wildlife Management

GENERAL AGRICULTURE

First Two Years.—The freshman and sophomore years for all courses are outlined on a following page. This curriculum is intended to train students in broad basic fields of agriculture. For junior and senior years, the curriculum of each student is arranged in accordance with his vocational aims, subject to the approval of his adviser and the Director of Instruction.

Professional Opportunities. Students who specialize in some department of the School of Agriculture may look forward to one of the following professions:

Specialists in State or Federal Departments, or in Agriculture Colleges.—The School of Agriculture is equipped to train men as specialists in the various fields as indicated by the curricula outlined below.

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

Extension Specialists.—Students in this group will find employment as agricultural agents for railroads, and for commercial firms dealing in agri-

cultural products; as specialists in the various fields of agriculture in the extension departments of agricultural colleges, and as county agricultural agents.

County Agents.—The growing importance of marketing 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.

Specialists and Commercial Agricultural Agents. The School of Agriculture is well equipped to train men for agricultural industries, such as manufacturing fertilizers, livestock and poultry feeds, farm machinery, and 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 an attractive 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 Agriculture 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. Though this field is practically a new one, 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.

FOR ALL CURRICULA IN AGRICULTURE

(Except Agricultural Chemistry, Agricultural Engineering, Forestry, Landscape Architecture, and Wildlife Conservation and Management.)

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	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, 102, 103	3	3	3
Mathematical Analysis, Math. 111, 112	0	4	4
Military Science I, Mil. 101, 2, 3, or alternate	2	2	2
Fundamental Activities and Hygiene, P. E. 101, 102, 103	1	1	1
	17	21	21

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Farm Equipment, Agr. Eng. 202	0	3	0
Soils, Soils 201	0	0	4
General Economics, Econ. 201, 202	3	3	0
Agricultural Economics, Agr. Econ. 202	0	0	3
Physics for Agricultural Students, Phys. 115	5	0	0
Animal Physiology, Zool. 202, or Plant Physiology, Bot. 221	0	0	5
Economic Zoology, Zool. 102	0	4	0
General Botany, Bot. 101	4	0	0
Introduction to Organic Chemistry, Chem. 221	0	4	0
Animal Nutrition I, A. H. 202	0	3	0
General Poultry, Poul. 201	3	0	0
Principles of Forestry, For. 111	3	0	0
General Horticulture, Hort. 203	0	0	3
General Field Crops, F. C. 202	0	0	3
Military Science II, Mil. 201, 2, 3, or alternate	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1
	21	20	21

AGRICULTURAL ECONOMICS

Professor G. W. Forster, Head of the Department
Professors C. Horace Hamilton, Marc C. Leager; Associate Professors S. L. Clement, R. E. L. Greene; Instructors Rupert C. Barnes, H. A. Patton.

Facilities.—The Department of Agricultural Economics has available for its use 15 offices, a seminar room, a document room, a workshop, and a Departmental classroom. The Department is supplied with various calculating devices. In addition, by special arrangement of one of the large calculating-machine companies, a supply of calculators and tabulating devices is adjusted to the need for them. Charts on practically every phase of agricultural economics are at hand or are available through the courtesy of the U. S. Department of Agriculture. A large number of maps of farms located in various parts of the state is used as a basis for studying and for illustrating the principles and practices of farm management. The results of research in marketing, agricultural finance, taxation, insurance, and soil conservation practices have made a large volume of statistical information constantly available for undergraduate and graduate students. Maintained for reference is an up-to-date file of bulletins and documents covering all phases of agricultural economics.

The State a Laboratory.—The State of North Carolina is a laboratory for the Department. Studies are in progress on all important phases of agricultural economics: marketing of cotton, tobacco, fruits, and vegetables; farm credit, taxation of agriculture, farm prices, farm organization and management, land classification and land use. It is significant to the student in agricultural economics that much of the research is done in coöperation with the various agencies of the Federal Government.

Statistical Laboratory. All students in the department will have access to the facilities and personnel of the new Statistical Laboratory established at State College in coöperation with the U. S. Department of Agriculture, through formal courses and informal conferences.

CURRICULA IN AGRICULTURAL ECONOMICS

Farm Business Administration

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
English	3	3	3
Farm Management I, Agr. Econ. 303	0	0	3
Principles of Accounting, Econ. 301, 302, 303	3	3	3
Woodworking, M. E. 127	0	3	0
Economics	3	3	3
Technical Agricultural Courses	3	3	3
Electives	3	0	0
**Electives	3	3	3
	18	18	18

Senior Year

Agricultural Finance, Agr. Econ. 432	0	3	0
Farm Management II, Agr. Econ. 423	0	0	3
Farm Buildings, Agr. Eng. 322	0	3	0
Farm Cost Accounting, Agr. Econ. 402, 403	0	3	3
Agr. Marketing, Agr. Econ. 411	3	0	0
Terracing and Drainage, Agr. Eng. 303	0	0	3
Social Aspects of Land Tenure, Rur. Soc. 422 or Land Economics, Agr. Econ. 412	0	3	0
Agr. Drawing, Agr. Eng. 222	0	3	0
Survey of Statistical Methods, Econ. 408	3	0	0
Statistics	0	3	3
Technical Agricultural Courses	6	0	3
Electives	3	0	0
**Electives	3	3	3
	18	21	18

Farm Marketing and Farm Finance

For Freshman and Sophomore Years refer to page 61.

Junior Year

English	3	3	3
Marketing Methods, Econ. 311, 312	3	3	0
Rural Sociology, Rur. Soc. 302	0	3	0
Farm Management I, Agr. Econ. 303	0	0	3
Agr. Marketing, Agr. Econ. 411	3	0	0
Principles of Accounting, Econ. 301, 302, 303	3	3	3
Economics	3	3	3
Electives	0	0	4
**Electives	3	3	3
	18	18	19

Senior Year

Marketing Methods and Problems, Agr. Econ. 421	3	0	0
Cotton and Tobacco Marketing, Agr. Econ. 442	0	3	0
Agricultural Finance, Agr. Econ. 432	0	3	0
Agricultural Cooperation, Agr. Econ. 422	0	3	0
Rural Population Problems, Rur. Soc. 411	3	0	0
Community Organization, Rur. Soc. 413	0	0	3
Survey of Statistical Methods, Econ. 408	3	0	0
Statistics	0	3	3
Economics	3	3	3
Technical Agricultural Courses	3	0	6
**Electives	3	3	3
	18	18	18

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

AGRICULTURAL ENGINEERING

Professor D. S. Weaver, Head of the Department

Associate Professors G. W. Giles, A. T. Hendrix.

Purpose.—This curriculum has been arranged to give its graduates 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.

Breadth of Training. Because of 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, although of comparatively recent development, 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 professional business, or farming career, and enables him to capitalize on his farm experience.

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

Occupations Open to Graduates.—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.

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

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

Laboratory Equipment for Soil Conservation, such as that for terracing and gully control, consists of sets of surveying and leveling instruments.

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

A Bulletin Library of Agricultural Engineering is maintained for student reference.

CURRICULUM IN AGRICULTURAL ENGINEERING

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Algebra, Trigonometry, and Analytical Geometry, Math. 101, 102, 103	6	6	6
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Engineering Drawing II, M.E. 105, 106	3	3	0
Descriptive Geometry, M.E. 107	0	0	3
Military Science I, Mil. 101, 2, 3, or alternate	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	19	19	19

Summer requirement: Surveying, C. E. s.900.

Sophomore Year

Engineering Geology, Geol. 220	3	0	3
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Business English, Public Speaking, Eng. 211, 231	3	0	3
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Farm Equipment, Agr. Eng. 202	3	3	0
General Botany, Bot. 102	0	3	0
General Zoology, Zool. 101	4	0	0
Economic History, Hist. 101, 102, 103	3	3	3
Military Science II, Mil. 201, 2, 3, or alternate	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	21	20

Junior Year

Required for all Options

General Economics, Econ. 201, 202	3	3	0
Agricultural Econ., Ag. Econ. 202	0	0	3
Terracing and Drainage, Agr. Eng. 303	0	3	3
Farm Shop, Agr. Eng. 331, 332	3	3	0
General Field Crops, F.C. 202	0	3	0
General Horticulture, Hort. 203	0	3	3
Farm Buildings, Agr. Eng. 322	0	3	3
	6	12	9

Choice must be made of one of the following options:

General Option

Animal Nutrition I, A.H. 202	0	3	0
Extension Methods, Ag. Econ. 450	3	0	0
Engineering Mechanics, E.M. 301, 302	3	3	0
Strength of Materials, E.M. 320	0	0	3
Soils, Soils 201	4	0	0
**Electives	3	3	6
	13	9	9

** Three credits per term to be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

Rural Structures Option

COURSES	CREDITS First Term	Second Term	Third Term
Materials of Construction, C.E. 321	3	0	0
Engineering Thermodynamics II, M.E. 307-8-9	3	3	3
Perspective Drawing Arch. 206	1	0	0
Engineering Mechanics, E.M. 311-12-13	3	3	3
Strength of Materials, E.M. 321	0	0	3
**Electives	3	3	3
	13	9	12

Land Improvement Option

Soils, Soils 201	4	0	0
Fertilizers, Soils 302	0	3	0
Soil Management, Soils 303	0	0	3
Int. to Organic Chemistry, Chem. 221	4	0	0
Engineering Mechanics, E.M. 301, 302	3	3	0
Pastures and Forage Crops, F.C. 443	0	0	4
**Electives	3	3	3
	14	9	10

Power and Machinery Option

Mechanical Drawing, M.E. 211-12-13	2	2	2
Foundry, M.E. 122	1	0	0
Forging and Welding, M.E. 126	2	0	0
Elementary Mechanism, M.E. 215-16-17	1	1	1
Metallurgy, M.E. 222, 223	0	3	3
**Electives	6	3	3
	12	9	9

Senior Year

Required for all Options.

Rural Electrification, Agr. Eng. 432	0	3	0
Special Problems in Agr. Eng., Agr. Eng. 481	3	0	0
Senior Seminar, Agr. Eng. 491, 492, 493	1	1	1
Farm Management I, Ag. Econ. 303	0	0	3
Technical Writing I, Eng. 321	0	3	0
Rural Sociology, Rur. Soc. 302	0	3	0
	4	10	4

Choice must be made of one of the following Options

General Option

Dairy Machinery, A.H. 362	0	1	0
Dairy Cattle and Milk Production, A.H. 321	3	0	0
Farm Machinery and Tractors, Agr. Eng. 313	0	0	3
Erosion Prevention, Ag. Eng. 403	0	0	3
Farm Structures, Agr. Eng. 423	0	0	3
Soil Conservation and Land Use, Soils, 433	0	0	3
Principles of Forestry, For. 111	3	0	0
Cereal Crops, F.C. 302	0	3	0
General Poultry, Poul. 201	3	0	0
**Electives	6	6	6
	15	10	15

** Three credits per term to be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

Rural Structures Option

COURSES	CREDITS First Term	Second Term	Third Term
Graphic Statics, C.E. 423	1	0	0
Electrical Equipment for Building, E.E. 343	0	0	3
Construction Engineering I, C.E. 361, 362, 363	3	3	3
General Poultry, Poul. 201	3	0	0
Farm Structures, Agr. Eng. 423	0	0	3
Dairy Cattle and Milk Production, A.H. 321	3	0	0
Heating and Air Conditioning I, M.E. 404	0	3	0
Refrigeration, M.E. 405	0	3	3
**Electives	3	3	3
	13	9	15

Land Improvement Option

Hydraulic Structures, C.E. 443	0	0	3
Soil Conservation and Land Use, Soils 433	0	0	3
Erosion Prevention, Agr. Eng. 403	0	0	3
Soils of North Carolina, Soils 312	0	3	0
Farm Machinery and Tractors, Agr Eng. 313	0	0	3
Land Economics, Ag. Econ. 212	0	3	0
Principles of Forestry, For. 111	3	0	0
Fluid Mechanics, E.M. 330	3	0	0
**Electives	9	3	6
	15	9	15

Power and Machinery Option

Farm Machinery and Tractors, Agr. Eng. 313	0	0	3
Dairy Machinery, A.H. 362	0	1	0
Special Problems, Agr. Eng. 481, 483	3	0	3
Engineering Mechanics, E.M. 311, 312, 313	3	3	3
Elements of Electrical Eng. I, E.E. 320, 321	3	3	0
Electrical Equipment of Buildings, E.E. 343	0	0	3
**Electives	6	3	3
	15	10	15

AGRONOMY

Professor R. W. Cummings, Head of the Department

Professor Emeritus C. B. Williams

The teaching in this department is divided into two sections: Field Crops Section and Soils Section. Its objective is to provide a well-rounded practical as well as technical training for students in field crops, plant breeding, soils, fertilizers and other closely related subjects.

The combined facilities of the Consolidated University and of the Experiment Station provide excellent opportunities for advanced training leading to M.S. and Ph.D. degrees in Agronomy.

The advanced courses offered fulfill the needs of graduate work in all phases of Agronomy.

** Three credits per term to be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

FIELD CROPS SECTION

Professor G. K. Middleton, Head of Section

Associate Professors Paul H. Harvey, R. L. Lovvorn, J. A. Rigney, A. D. Stuart

Assistant Professors E. Y. Floyd, B. W. Smith

Instructors S. W. Holman, L. T. Weeks

Approximately eighty percent of the farm income in North Carolina is from field crops, and their annual value is such that the State ranks third in the Nation in cash income from this source. The curriculum in this Section is set up to give definite instruction on the crops produced in the State and in plant breeding.

This curriculum is flexible, making it possible for students to elect sufficient courses in other departments for a general training in Agriculture, or for specialization in preparation for graduate work in Agronomy. The more general training will equip them to become better farmers, or for work with the Agricultural Extension or Soil Conservation Services or other general fields of agriculture.

Advanced training is provided for those who desire to go into the more technical phases of crop production or plant breeding, such as teaching or research in State or Federal institutions.

CURRICULUM IN FIELD CROPS

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
English	3	3	3
Soil Fertility, Soils 221	3	0	0
Fertilizers, Soils 302	0	3	0
Soil Management, Soils 303	0	0	3
Cereal Crops, F.C. 302	0	3	0
Pastures and Forage Crops, F.C. 443	0	0	4
Diseases of Field Crops, Bot. 301	3	0	0
Major Options	6	6	4
Electives	3	4	4
	18	19	18

Senior Year

Genetics, Zool. 411	4	0	0
Plant Breeding, F.C. 163	0	3	3
Major Option	4	3	0
Tech. Agr.	6	6	6
Electives	4	6	9
	18	18	18

SOILS SECTION

Professor J. F. Lutz, Head of Section
Professor R. W. Cummings; Associate Professor E. R. Collins
Assistant Professors, W. D. Lee, J. R. Piland

The soil is a natural body composed of mineral and organic matter, air, water, and living micro-organisms. The reactions of and changes in these components extend into the fields of chemistry, geology, physics and biology, which sciences are fundamentals to soils. No state in the Union offers better opportunities for soil and fertilizer studies than North Carolina for within her borders are soils derived from a large variety of parent materials and developed under climatic conditions varying from a subtropical climate in the southeastern part of the state to the cooler climates of the mountains. This state has been one of the few which has steadily pushed forward her soil-survey work so that now county soil-survey reports and maps are avail able for practically all the counties of the entire state.

The importance of soils in North Carolina agriculture is evidenced by the fact (1) that more fertilizer is used in North Carolina than in any other state in the Union and (2) that North Carolina ranks third among the states in cash income derived from farm crops.

Students are given practical training in the properties and management of soils which equips them for general agricultural work, such as farmers, county agents, and vocational teachers. Advanced training is provided for those who desire to go into the more technical phases of soils, such as teaching or research in State or Federal institutions. The flexibility of the curriculum in soils, through a sufficient number of optional courses, permits the student to choose the type of training he desires.

CURRICULUM IN SOILS

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
English or Modern Language	3	3	3
Soil Fertility, Soils 221	3	0	0
Fertilizers, Soils 302	0	3	0
Soil Management, Soils 303	0	0	3
Cereal Crops, F.C. 302	0	3	0
Pasture and Forage Crops, F.C. 443	0	0	3
Qualitative and Quantitative Analysis, Chem. 211, 212, 213	4	4	4
Major Options	6	0	0
Electives	3	6	3
	19	19	17

Senior Year

Genetics, Zool. 411	4	0	0
*Plant Breeding, F.C. 463	0	0	3
Major Options	6	6	6
Technical Agriculture	6	6	6
Electives	3	6	3
	19	18	18

* F.C. 312, Tobacco Production or F.C. 323, Cotton Production or F.C. 461, Taxonomy of Field Crops, may be substituted for Plant Breeding.

ANIMAL HUSBANDRY AND DAIRYING

Professor R. H. Ruffner, Head of the Department
Professors E. H. Hostetler, W. L. Clevenger, F. M. Haig
Associate Professor C. D. Grinnells
Assistant Professor, R. S. Glasscock

The Department of Animal Husbandry and Dairying is housed in Polk Hall, a three-story building which was designed to meet the needs of college instruction, research, and extension work in Animal Husbandry and Dairying.

In the basement of Polk Hall are two wings, one of which is devoted to Dairy Manufacturing and the other to Farm Meats. The Dairy wing has recently been equipped with new dairy machinery, including direct-expansion ice cream freezer, churn, pasteurizer, milk bottler, and milk-cooling and storage equipment. This equipment is used daily by students who bottle milk, and manufacture ice cream and other dairy products used in the College Cafeteria. The other wing is used for slaughtering beef cattle, sheep, and swine, and for the aging and curing of the meats produced from these animals. Sufficient equipment is provided in the Meat Laboratory to do the necessary work in the time allotted, yet the courses are so adapted that the students can apply both theory and practice to conditions on the farm. Both the dairy and the meat wings have their own individual mechanical refrigeration units so that the courses can be taught at any season of the year.

The upper floors of the building contain offices, classrooms, library, milk-testing laboratory, farm-dairy laboratory, animal nutrition laboratories, and beef cattle, sheep, and swine research laboratories. Extension specialists in swine, dairy, beef, and sheep have offices in this building.

In addition, the Department of Animal Husbandry and Dairying maintains two livestock farms located a few miles from the College.

The Dairy Farm contains 400 acres. Two fire-proof completely equipped dairy barns house 100 registered Jerseys, Guernseys and Holsteins. A herd of registered Ayrshires is maintained at the College Experiment Station nearby. A milk house, designed for convenience in handling milk in the most efficient and sanitary manner, connects the two barns. Other buildings located on the dairy farm are horse and calf barns.

The Animal Husbandry Farm adjoining the Dairy Farm contains 500 acres. Here registered breeds of swine, sheep, and beef cattle are maintained for research and college teaching.

The Department of Animal Husbandry and Dairying is equipped to instruct students in the feeding, breeding, and management of farm animals. Students feed and milk cows; conduct research; manufacture dairy products; feed and prepare animals for exhibition and the block, actually doing the slaughtering, and the cutting of the meat for market and home use.

Well-trained young men in the various fields of Animal Husbandry and Dairying have greater opportunities for service and success than ever before. This fact is demonstrated by the following responsible positions held by graduates in Animal Husbandry and Dairying:

1. Livestock and dairy farmers.
2. County agents and extension specialists in livestock.
3. Livestock research investigators.
4. Superintendents and owners of dairy manufacturing plants.
5. Teachers in agricultural colleges.
6. Managers and salesmen in commercial livestock and feed companies.
7. Milk inspectors.
8. Workers for livestock breed associations.
9. Workers for banks and corporations in livestock industries.
10. Supervisors of dairy herd improvement associations.

CURRICULUM IN ANIMAL PRODUCTION

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Dairying, A.H. 341	0	3	0
Swine Production, A.H. 331	3	0	0
Farm Meats I, A.H. 301	0	3	0
Animal Nutrition II, A.H. 361	3	0	0
History of Breeds, A.H. 322, 323	0	3	3
Herd Improvement, A.H. 413	0	0	3
Business English, Eng. 211	0	0	3
Public Speaking, Eng. 231	0	3	0
†Southern Writers, Eng. 275	3	0	0
Genetics, Zool. 411	4	0	0
Pastures and Forage Crops, F.C. 443	0	0	4
Chemistry of Vitamins, Chem. 462	0	3	0
Market Grading of Field Crops, F.C. 451	3	0	0
Animal Hygiene and Sanitation, A.H. 353	0	0	3
Electives	3	3	3
	19	18	19

Or any one of English Courses 261 to 267.

Senior Year

Animal Breeding, A.H. 421	4	0	0
Sheep Production, A.H. 313	0	0	3
Beef Cattle, A.H. 372	0	3	0
Pure Bred Livestock Production, A.H. 432	0	3	0
Stock Farm Management, A.H. 433	0	0	3
Horse and Mule Production, A.H. 351 or Dairy Cattle and Milk Production, A.H. 321	3	0	0
Senior Seminar, A.H. 391-392-393	1	1	1
Incubation and Brooding, Poul. 303	0	0	3
Terracing and Drainage, Agr. Eng. 303	0	0	3
General Bacteriology, Bot. 402	0	4	0
Fruit Growing, Hort. 331	1	0	0
Agricultural Marketing, Agr. Econ. 411	3	0	0
Testing of Milk Products, A.H. 332	0	4	0
Business Law, Econ. 307	0	0	3
Electives	3	3	3
	18	18	19

CURRICULUM IN DAIRY MANUFACTURING

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Creamery Buttermaking, A.H. 371	4	0	0
Testing of Milk Products, A.H. 332	0	4	0
Ice Cream Making, A.H. 381	4	0	0
Cheese Making, A.H. 333	0	0	3
Dairy Manufacturing Practice, A.H. 342	0	3	0
City Milk Supply, A.H. 343	0	0	4
Business English, Eng. 211	0	0	3
Public Speaking, Eng. 231	0	3	0
†Southern Writers, Eng. 275	3	0	0
Chemistry of Vitamins, Chem. 462	0	0	3
Animal Breeding, A.H. 421	4	0	0
Food and Nutrition, Chem. 482	0	3	0
Animal Hygiene and Sanitation, A.H. 353	0	0	3
Farm Engines, Agr. Eng. 212	0	3	0
Electives	3	3	3
	18	19	19

† Or any one of English courses 261 to 267.

Senior Year

Dairy Machinery, A.H. 362	0	1	0
Dairy Products Judging, A.H. 394	0	0	1
Dairy Manufactures, A.H. 401, 402, 403	3	3	3
Senior Seminar, A.H. 391, 392, 393	1	1	1
General Bacteriology, Bot. 402	0	4	0
Swine Production, A.H. 331	3	0	0
Animal Nutrition II, A.H. 361	3	0	0
Farm Meats I, A.H. 301	0	3	0
Business Law, Econ. 307	0	0	3
Herd Improvement, A.H. 413	0	0	3
Food Products and Adulterants, Chem. 441	3	0	0
Stock Farm Management, A.H. 433	0	0	3
Agricultural Marketing, Agr. Econ. 411	3	0	0
Farm Accounting, Agr. Econ. 313	0	0	3
Pure Bred Livestock Production, A.H. 432	0	3	0
Electives	3	3	3
	19	18	20

BOTANY

Professor B. W. Wells, Head of the Department
Professors D. B. Anderson, S. G. Lehman, L. Shaw
Associate Professor I. V. Shunk
Assistant Professors M. F. Buell, L. A. Whitford

Equipment and Facilities

Location. The Department of Botany occupies the second floor of Winston Hall.

Laboratories.—The laboratories are all equipped with projection lanterns. A well-organized herbarium supports the work in systematic botany and dendrology.

Greenhouses.—Ample greenhouse facilities are available for work in physiology and pathology.

Purpose.—The Department emphasizes those phases of plant science which are foundational for the work in Agriculture and Forestry.

CURRICULUM IN PLANT PATHOLOGY

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Business English, Eng. 211	0	0	3
Public Speaking, Eng. 231	0	3	0
Technical Writing II, Eng. 323	0	0	3
Bacteriology, Bot. 402	0	4	0
Diseases of Field Crops, Bot. 301	3	0	0
Diseases of Fruit and Vegetable Crops, Bot. 302	0	0	3
Plant Ecology, Bot. 441	3	0	0
Economic Entomology, Zool. 213	0	0	4
Plant Morphology, Bot. 411, 412	3	3	0
Genetics, Zool. 411	4	0	0
Electives	6	8	5
	19	18	18

Senior Year

Plant Microtechnique, Bot. 451	3	0	0
Advanced Plant Pathology, Bot. 401	0	3	0
Pathogenic Fungi, Bot. 481, 2, 3	3	3	3
Soil Microbiology, Bot. 443	0	0	3
Plant Breeding, F.C. 463	0	0	3
Microanalysis of Plant Tissue, Bot. 442	0	3	0
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 233	0	0	4
Electives	8	7	5
	18	18	18

CHEMISTRY

Professor A. J. Wilson, Head of the Department
Professors L. F. Williams, G. H. Satterfield
Associate Professors W. E. Jordan, M. F. Showalter
Asssitant Professors H. L. Caveness, A. D. Jones
Instructors W. A. Reid, P. P. Sutton, R. C. White, R. H. Loeppert

Curriculum. The Department of Chemistry does not offer a Bachelor of Science degree in Chemistry. However, a student may register in the School of Agriculture with a major in Agricultural Chemistry. This curriculum affords extended courses of chemical training which will fit a graduate for positions such as those in State Experiment Stations, and in State and Federal laboratories for the inspection and control of fertilizers, feeds, foods, and other commodities, and as chemist in industrial plants.

Instruction.—Instruction in the Department of Chemistry embraces the courses of lectures and the related courses of laboratory work which are described in detail under the appropriate heading of each individual course included in the curricula of the Department.

New Building.—The Chemistry Department is now housed in a new four-story brick building. This building provides adequate and modern laboratories for general chemistry, for qualitative and quantitative analysis, and for organic, physical, and biological chemistry. Numerous recitation rooms are provided, besides the large main lecture room.

Library. Part of one wing of the building has been set aside for the General Science Library, supervised by a full-time trained librarian.

Future. The building is planned to fulfill the needs of the Chemistry Department for the next ten years, and also with a view to later expansion to approximately twice the present size.

CURRICULUM IN AGRICULTURAL CHEMISTRY

For Freshman Year refer to page 47.

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. 202, or Plant Physiology, Bot. 221	0	0	5
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212, 233	0	4	4
Soils, Soils 201	4	0	0
Bacteriology, Bot. 402	0	4	0
Animal Nutrition I, A.H. 202	0	0	3
General Economics, Econ. 201, 202	3	3	0
Agricultural Economics, Agr. Econ. 202	0	0	3
Military Science II, Mil. 201, 202, 203, or alternate	2	2	2
Sport Activities, P. E. 201, 202, 203	1	1	1
	18	18	18

Junior Year

Organic Chemistry, Chem. 421, 422, 423	4	4	4
Physics for Textile Students, Phys. 111, 112, 113	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

EXPERIMENTAL-STATISTICS

Professor Gertrude M. Cox, Head of the Department
Professor C. H. Hamilton
Associate Professors J. M. Clarkson, J. A. Rigney
Instructor R. J. Monroe
Agricultural Marketing Service, Resident Collaborators
W. A. Hendricks, A. L. Finkner

The Department of Experimental-Statistics does not offer a major leading to a degree. Its courses are designed to furnish students in other majors with the necessary training to plan and carry on research problems, as well as the proper assembling and interpretation of data.

FORESTRY

Professor J. V. Hofmann, Director of the Division
Professor L. Wyman, Associate Professors W. D. Miller,
G. K. Slocum; Assistant Professor J. W. Chalfant

Areas for Field Work.—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 George Watts Hill Demonstration Forest, near Durham, is a tract of 1,400 acres. It contains stands of short-leaf and loblolly pine, oaks, gum, tulip, dogwood, and all of these species in different associations. A rolling terrain, it serves admirably for the study of forest problems in the Piedmont Section.

The MacLean Forest is located in Hyde County, in the eastern part of the State, containing 1,554 acres; it is admirably adapted for demonstration in the Coastal Plain type of forest.

The Hofmann Forest. A large tract of land in Jones and Onslow Counties, in the southeastern part of the State, 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.

Total Areas.—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 except those of the Mountain Region.

The Arboretum area of seventy acres near Raleigh is being developed to contain all of the tree species and associated shrubs that grow in this climatic condition. It contains swamp and upland which adapts it for this use. More than a hundred 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 its work.

Greenhouse space is available for special problems in forest research.

Purposes of the Curriculum. 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.

Forestry as a 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 the past, as the foundation has been laid; 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; last but by no means least, the farm woodlands.

Occupations. 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 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 property a permanent producing unit. All forestry is now being built on this basis.

Forest Utilization requires special courses dealing with the value and various uses 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.

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

Research in Forestry is being recognized as important 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.

Graduation. A minimum of 236 term credits with at least 236 honor points are required for graduation in Forestry.

A Field Trip through the Southeastern and the 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. 101, 102, 103	1	1	1
Botany, General and Systematic Bot. 101, 102, 203	4	4	3
Mathematical Analysis, Math. 111, 112	0	4	4
Composition, Eng. 101, 102, 103	3	3	3
General and Economic Zoology, Zool. 101, 102	4	4	0
Economic Entomology, Zool. 213	0	0	4
Elementary Forestry, For. 101, 102, 103	1	1	1
Introductory Sociology, Soc. 202	3	0	0
Military Science I, Mil. 101, 102, 103, or Human Relations, Soc. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	19	20	19

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Math. of Finance, Math. 113	0	0	4
Introduction to Economics, Econ. 205	3	0	0
Land Economics, Agr. Econ. 212	0	3	0
Plant Physiology, Bot. 221	5	0	0
Dendrology, Bot. 211, 213	3	0	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Wood Technology, For. 202	0	3	0
Physical Geology, Geol. 120	0	4	0
Surveying, Theoretical, C.E. 221, 222	0	3	3
Field Surveying, C.E. 225	0	1	0
Topographical Drawing, C.E. 224	0	0	1
Introduction to Psychology, Psychol. 200	0	0	3
Military Science II, Mil. 201, 202, 203, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	18	21	21

Summer Camp

Surveying and Mapping, C.E. s300	0	0	3
Dendrology, For. s214	0	0	3
Mensuration, For. s304	0	0	3
Silviculture, For. s204	0	0	3
			12

Junior Year

Forest Protection and Improvement, For. 342	6	3	0
Nursery Practice, For. 313	1	0	1
Soils, Soils 201	0	0	4
Mensuration I, II, For. 402, 403	3	3	0
Silviculture I, II, For. 311, 312	3	3	0
English	0	3	3
Forest Entomology, Zool. 302	0	3	0
Plant Ecology, Bot. 441	3	0	0
Meteorology, Phys. 322	0	3	0
Forest Finance, For. 442	3	0	0
Survey of Statistical Methods, Econ. 408	3	0	0
Elective in Social Science Group	0	0	6
Electives	3	3	6
	18	21	20

Senior Year

Logging, For. 421	3	0	0
Diseases of Forest Trees, Bot. 311	3	0	0
Silviculture III, IV, For. 411, 412	3	3	0
Forest Management, For. 431, 432	3	3	0
Seminar, For. 452	0	2	0
Forest Products, For. 321	3	0	0
Forest Utilization, For. 323	0	0	2
Timber Appraisal, For. 443	0	0	2
English	0	3	0
Senior Field Trip, For. 453	0	0	3
Electives	3	6	5
	18	17	12

HORTICULTURE

Professor M. E. Gardner, Head of the Department
Associate Professors G. O. Randall, Robert Schmidt, J. G. Weaver

Equipment.—The Department of Horticulture is well prepared in classrooms and in laboratory and field equipment to offer instruction in its several important and diverse fields.

Pomology and Small-Fruit Culture. The College orchards and vineyards, the laboratories, 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. Four modern greenhouses, forming an important part of the equipment of the Department, 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 for both undergraduate and graduate instruction. Land and equipment to demonstrate and study details of commercial olericulture are convenient to the greenhouses.

Special Study and Research.—A Physiological and a Cytological Laboratory, calculating machines, library, greenhouses, and land are available to graduate and undergraduate students to carry on special studies. Projects conducted by the Experiment Station Staff are also available for study and observation.

Library.—The Departmental library contains approximately twenty thousand technical and popular bulletins covering all phases of horticulture, and complete bound volumes of the Proceedings of the American Society for Horticultural Science and many other periodicals pertaining to horticultural subjects.

CURRICULUM IN FLORICULTURE

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Public Speaking, Eng. 231	3	0	0
Business English, Eng. 211	3	0	0
Bacteriology, Bot. 402	0	4	0
Systematic Botany, Bot. 203	0	0	3
Diseases of Fruit and Vegetable Crops, Bot. 303	0	0	3
Genetics, Zool. 411	4	0	0
Economic Entomology, Zool. 213	0	0	4
Plant Propagation, Hort. 301	0	3	0
Soil Fertility, Soils 221	3	0	0
Soils of North Carolina, Soils 312	0	3	0
Fertilizers, Soils 302	0	3	0
Plant Materials: Woody Plants, L.A. 201, 202, 203	2	2	2
Terracing and Drainage, Agr. Eng. 303	0	0	3
Plant Materials: Herbaceous Plants, L.A. 303	0	0	2
Electives	3	3	3
	18	18	20

Senior Year

COURSES	CREDITS First Term	Second Term	Third Term
Plant Ecology, Bot. 441	3	0	0
Technical Writing II, Eng. 323	0	0	3
Commercial Floriculture, Hort. 341	4	0	0
Horticultural Problems, Hort. 421, 422, 423	2	2	2
Seminar, Hort. 431, 432, 433	1	1	1
Experimental Horticulture, Hort. 412	0	3	0
Agricultural Cooperation, Agr. Econ. 422	0	3	0
Rural Sociology, Rural Soc. 302	0	3	0
Agricultural Chemistry, Chem. 481	3	0	0
Plant Breeding, F.C. 463	0	0	3
Applied Psychology, Psychol. 302	0	3	0
Landscape Gardening, L.A. 403	0	0	3
Floral Design, Hort. 312	0	1	0
Electives	5	3	6
	18	19	18

CURRICULUM IN POMOLOGY

For Freshman and Sophomore Years refer to page 61.

Junior Year

Public Speaking, Eng. 231	3	0	0
Business English, Eng. 211	0	3	0
Systematic Botany, Bot. 203	0	0	3
Plant Ecology, Bot. 441	3	0	0
Small Fruits and Grapes, Hort. 311	3	0	0
Plant Propagation, Hort. 301	0	3	0
Vegetable Gardening, Hort. 303	0	0	4
Soil Fertility, Soils 221	3	0	0
Fertilizers, Soils 302	0	3	0
Terracing and Drainage, Agr. Eng. 303	0	0	3
Ornamental Plants, L.A. 402	0	2	0
Landscape Gardening, L.A. 403	0	0	3
Genetics, Zool. 411	4	0	0
Economic Entomology, Zool. 213	0	0	4
Applied Psychology, Psychol. 302	0	3	0
Electives	3	3	3
	19	17	20

Senior Year

Bacteriology, Bot. 402	0	4	0
Diseases of Fruit and Vegetable Crops, Bot. 303	0	0	3
Technical Writing, Eng. 323	0	0	3
Systematic Pomology, Hort. 401	2	0	0
Fruit Growing, Hort. 331	4	0	0
Horticultural Problems, Hort. 421, 422, 423	2	2	2
Seminar, Hort. 431, 432, 433	1	1	1
Experimental Horticulture, Hort. 412	0	3	0
Farm Management I, Agr. Econ. 303	0	0	3
Plant Breeding, F.C. 463	0	0	3
Farm Meats I, A.H. 301	0	3	0
Agricultural Chemistry, Chem. 481	3	0	0
Rural Sociology, Rur. Soc. 302	0	3	0
Poultry Elective	3	0	0
Electives	3	3	3
	18	19	18

CURRICULUM IN VEGETABLE GARDENING

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Public Speaking, Eng. 231	3	0	0
Business English, Eng. 211	0	3	0
Plant Ecology, Bot. 441	3	0	0
Bacteriology, Bot. 402	0	4	0
Systematic Botany, Bot. 203	0	0	3
Diseases of Fruit and Vegetable Crops, Bot. 303	0	0	3
Fruit Growing, Hort. 331	4	0	0
Plant Propagation, Hort. 301	0	3	0
Vegetable Forcing, Hort. 302	0	3	0
Vegetable Gardening, Hort. 303	0	0	4
Soil Fertility, Soils 221	3	0	0
Fertilizers, Soils 302	0	3	0
Genetics, Zool. 411	4	0	0
Economic Entomology, Zool. 213	0	0	4
Terracing and Drainage, Agr. Eng. 303	0	0	3
Electives	3	3	3
	20	19	20

Senior Year

Technical Writing II, 323	0	0	3
Systematic Olericulture, Hort. 411	2	0	0
Small Fruits and Grapes, Hort. 311	3	0	0
Horticultural Problems, Hort. 421, 422, 423	2	2	2
Seminar, Hort. 431, 432, 433	1	1	1
Experimental Horticulture, Hort. 412	0	3	0
Home Floriculture, Hort. 313	0	0	3
Agricultural Chemistry, Chem. 481	3	0	0
Plant Breeding, F.C. 463	0	0	3
Ornamental Plants, L.A. 402	0	2	0
Landscape Gardening, L.A. 403	0	0	3
Agriculture Cooperation, Agr. Econ. 422	0	3	0
Dairying, A.H. 341	3	0	0
Soils of North Carolina, Soils 312	0	3	0
Rural Sociology, Rur. Soc. 302	0	3	0
Electives	6	3	3
	20	20	18

LANDSCAPE ARCHITECTURE

Professor J. P. Pillsbury, Head of the Division
Associate Professors G. O. Randall, J. G. Weaver

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 relations 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 fine arts, certain branches of engineering, and ornamental horticulture. Properly, it is dominated by the principles of design, and therefore may be correctly classified as a fine art. Its province is the design of landscapes, the preparation of plans and specifications for them, and supervision during construction.

The Curriculum in Landscape Architecture is strictly undergraduate. Its purpose is to provide a broad and thorough foundation for the additional postgraduate training which the profession requires of those desiring to enter its ranks. It also presents an open door to the professional fields of city or regional planning as the student may elect when undertaking graduate work. The soundness of the curriculum here presented is attested not only by the fact that at no time has the demand for the services of its graduates been fully satisfied, but also by the successes of those who have pursued graduate training and attained to full rank in the professional field of Landscape Design.

Training in Landscape Construction is similar to that in Landscape Architecture, but with emphasis upon materials and methods of construction employed in engineering and ornamental horticulture.

Training in Landscape Gardening is essentially ornamental horticulture. In neither case is graduate work required, since their provinces will not include the design of landscape, but only the execution of plans under supervision in the one case, and the maintenance of the constructed landscape in the other. Students electing either of these two lines of study will, during their first two years, pursue the **Basic Curriculum in General Agriculture**, with two or three substitutions from other curricula, as indicated.

General Equipment and Special Facilities for instruction are ample in the combined resources of Civil and Architectural Engineering, Horticulture, and Landscape Architecture.

Plant Materials in extensive collections on the College grounds and at various points elsewhere within a short distance, furnish an ample supply of all kinds for both study and use. In addition, several notable collections are available for occasional visits and study.

The Material for **Landscape Design and Construction** available on College grounds, private properties, and numerous public and semipublic areas and institutions in and about Raleigh, provide a wide range of subjects for study and practice. The City of Raleigh itself is a most interesting city-planning study, since it is one of the very few existing examples of a capital city which was planned in advance of its building.

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, 102, 103	3	3	3
Botany, General and Systematic, Bot. 101, 102, 203	4	4	3
Engineering Drawing II, and Descriptive Geometry, M.E. 105, 106, 107	3	3	3
Arboriculture, L.A. 101, 102, 103	1	1	2
Drawing, C.E. 101, 102, 103	1	1	1
Military Science I, Mil. 101, 102, 103, or Human Relations, Soc. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	21	21	21

Sophomore Year

Business English and Public Speaking, Eng. 211, 231	3	0	3
Plant Physiology, Bot. 221	0	0	5
Plant Propagation and Nursery Practice, Hort. 301	5	0	0
Physical Geology, Geol. 120	0	4	0
Introduction to Economics, Econ. 205	0	3	0
Introduction to Psychology, Psychol. 200	3	0	0
Introduction to Architecture, Arch. 201	3	0	0
Elements of Architecture, Arch. 202, 203	0	3	3
Surveying, Theoretical, C.E. 221, 222	3	3	0
Field Surveying, C.E. 225, 227	1	0	1
Plant Materials: Woody Plants, L.A. 201, 202, 203	2	2	2
Theory of Landscape Design, L.A. 212, 213	0	3	3
Military Science II, Mil. 201, 202, 203, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	21	20

Surveying, C.E. 230, concurrent with Summer School, 3 credits.

Junior Year

Plant Materials: Herbaceous Plants, L.A. 303	0	0	2
Plant Ecology, Bot. 441	3	0	0
History of Landscape Design, L.A. 311, 312	3	3	0
Landscape Design I, L.A. 321, 322, 323	4	4	4
Technical Writing, Eng. 321	0	0	3
Shade and Shadows, Arch. 205	2	0	0
Freehand Drawing I, Pen and Pencil Drawing, Arch. 101	2	0	0
Freehand Drawing II, Water Color, Arch. 102	0	2	0
Freehand Drawing III, Charcoal, Arch. 103	0	0	2
Perspective Drawing, Arch. 206	0	2	0
Economic Zoology and Entomology, Zool. 102, 213	0	4	4
History of Architecture, Arch. 321, 322	3	3	0
*Electives	3	3	3
	20	21	18

* Elective credit must include 12 credits in Social Science.

Senior Year

COURSES	CREDITS First Term	Second Term	Third Term
Planting Design, L.A. 411, 412, 413	3	3	3
Landscape Design II, L.A. 421, 422, 423	4	4	4
City Planning, L.A. 432	0	3	0
Landscape Construction, L.A. 451, 452, 453	2	2	2
Pencil Sketching, Arch. 100	3	0	0
Accounting for Engineers, Econ 212	0	3	0
Appreciation of Fine Arts, Arch. 111, 112, 113	3	3	3
*Electives	3	3	3
	18	21	15

POULTRY SCIENCE

Professor R. H. Dearstyne, Head of the Department
Assistant Professors N. W. Williams, H. C. Gauger, R. E. Greaves; Instructor D. W. Gregory.
Research Coöperators: Zoölogy Department, Associate Professors C. H. Bostian, R. Harkema

Laboratories: The Poultry Department is housed on the second floor of Ricks Hall. It embraces the Disease Diagnostic, the Anatomy-Hematology, and the Disease Research Laboratories, the Incubator Room, and two Live Bird Laboratories. The laboratories are well equipped for teaching and research.

The Seminar Room: Affording access to technical and to popular publications, to preserved pathological specimens, is open to the students at all times.

Purpose and Scope: The Poultry Department, as a major division of the School of Agriculture and Forestry, serves North Carolina through teaching, research, and extension. Its research personnel embraces the field of avian genetics, parasitology, sero-bacteriology, histology, pathology and hematology. It has two poultry farms (chickens and turkeys) near the campus and two Experiment Station farms in the eastern and the western parts of the state. The staff devotes its full time to poultry problems of the student, the poultryman and the industry. It serves a chicken and turkey farm industry of nearly 10,000,000 birds in North Carolina valued at approximately $30,000,000. It coöperates with the commercial concerns allied with poultry.

Central Poultry Plant: Consists of forty buildings located on seventeen acres. Six laying houses and sixteen mating pens house approximately 250 breeders and 1,500 layers. All layers of three breeds of chickens are pedigreed and trap-nested. About 4,000 chicks are produced each year, all of these being pedigreed. An 18,000-capacity incubator is used for teaching commercial incubation.

Central Turkey Plant: Consists of five new buildings located on twenty-five acres. One laying house and six mating pens house approximately 250 large bronze turkeys, all pedigreed and trap-nested. One 1,500-capacity incubator is used.

* Elective credit must include 12 credits in Social Science.

These two Plants provide abundant material for teaching and demonstrating principles of poultry management, breeding, judging and sanitation.

Disease Diagnostic Laboratory: Serves directly and indirectly the poultrymen of the State. Approximately 25,000 birds have been autopsied since 1923; 1,500 to 2,000 are now autopsied annually. One thousand or more poultrymen are reached each year by correspondence and 250 receive personal attention in the laboratory. The birds received serve as excellent material for teaching, for laboratory material in the courses in anatomy and poultry diseases, and for investigational work in avian bacteriology, serobacteriology, anatomy, histology, pathology, hematology and parasitology.

Curriculum: Is designed to broaden and to balance the training of undergraduate and graduate students in poultry husbandry. Emphasis is placed on those phases of biology, production, management, and sanitation which will enable the student to enter the fields of plant management, extension, or graduate research.

Research: A substantial research program is pursued in genetics, serobacteriology, histology, pathology, hematology and parasitology.

CURRICULUM IN POULTRY SCIENCE

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
English Elective	0	3	0
Technical Writing II, Eng. 323	0	0	3
Public Speaking, Eng. 231	0	0	3
Poultry Anatomy, Poul. 311, 312	3	3	0
Poultry Judging, Poul. 301	4	0	0
Poultry Nutrition, Poul. 333	0	0	4
Preparation and Grading of Poultry Products, Poul. 332	0	3	0
Incubation and Brooding, Poul. 303	0	0	3
Bacteriology, Bot. 402	0	4	0
Genetics, Zool. 411	4	0	0
Vertebrate Embryology, Zool. 461	5	0	0
Cereal Crops, F.C. 302	0	3	0
Farm Management I, Agr. Econ. 303	0	0	3
Electives	3	3	3
	19	19	19

Senior Year

Poultry Diseases, Poul. 401, 402	4	4	0
Sero-Diagnosis in Poultry Diseases, Poul. 403	0	0	3
Commercial Plant Management, Poul. 412	0	3	0
Selecting and Mating Poultry, Poul. 413	0	0	3
Senior Seminar, Poul. 423	0	0	3
Swine Production, A.H. 331	3	0	0
Dairy Cattle and Milk Production, A.H. 321	3	0	0
Fruit Growing, Hort. 331	4	0	0
Turkey Production, Poul. 342	0	3	0
Rural Sociology, Rur. Soc. 302	0	3	0
Agr. Marketing, Agr. Econ. 411	3	0	0
Terracing and Drainage, Agr. Eng. 303	0	0	3
Chemistry of Vitamins, Chem. 462	0	3	0
Electives	3	3	6
	20	19	18

RURAL SOCIOLOGY

Professor C. Horace Hamilton, Head of the Department
Professors G. W. Forster, Sanford Winston
Assistant Professors Selz C. Mayo, L. Walter Seegers. William McGehee

Objectives.—The principal objectives of this department are: (1) to give all students an appreciation of the human and social values in agriculture and rural life; (2) to give the future farmer and rural citizens an understanding of the social problems of the rural community; (3) to train rural leaders in methods of group organization and social control; (4) to train a few exceptional young men in rural sociological research and extension methods.

Relation to Other Departments.—The Department of Rural Sociology is closely related to and dependent upon other Social Science Departments in the College and in the Consolidated University. Students specializing in rural sociology will be expected to take courses in such departments as: Sociology, Psychology, Statistics, Agricultural Economics, History, and Political Science. The Department of Rural Sociology functions also in a service capacity to Agricultural Departments. Students taking courses in technical agriculture may take one or more courses in Rural Sociology as an elective Social Science.

Laboratory and Research Facilities.—The Department of Rural Sociology is constantly engaged in statistical and sociological studies of rural population, rural standards of living, rural communities, and related problems. Funds, laboratory equipment and other facilities for this work are provided by the Agricultural Experiment Station and are available for the use of advanced students specializing in the field of Rural Sociology.

In a broader sense, the entire State is a laboratory for the study of rural social problems. Field trips and extended surveys may be carried out by advanced students during the summer months.

CURRICULA IN RURAL SOCIOLOGY

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
English (to be selected)	3	3	3
General Sociology, Soc. 202, 203	3	3	0
Rural Sociology, Rur. Soc. 302	0	0	3
Introduction to Psychology, Psy. 200	3	0	0
Psychology of Personality, Psy. 291	0	3	0
History of American Agriculture, Hist. 319	0	0	3
American Political Parties, Pol. Sc. 203 or American Gov't. Pol. Sc. 200	3	0	0
State Government and Administration, Pol. Sc. 201	0	3	0
Electives	6	6	9
	18	18	18

Senior Year

The Family Organization, Soc. 406	3	0	0
Rural Poverty and Relief, Rur. Soc. 432	0	3	0
Community Organization, Rur. Soc. 413	0	0	3
Rural Population Problems, Rur. Soc. 411	3	0	0
Social Aspects of Land Tenure, Rur. Soc. 422 or Problems of Land Economics, Agr. Econ. 412	0	3	0
Farm Management I, Agr. Econ. 303	0	0	3
Agricultural Cooperation, Agr. Econ. 422	0	3	0
Agricultural Marketing, Agr. Econ. 411	3	0	0
Social Pathology, Soc. 401	0	0	3
Survey of Statistical Methods, Econ. 408	3	0	0
Statistical Methods, Stat. 412	0	3	0
Statistical Analysis of Social Data, Stat. 451	0	0	3
Technical Agriculture	3	3	3
Electives	3	3	3
	18	18	18

ZOOLOGY AND ENTOMOLOGY

Professor Z. P. Metcalf, Head of the Department

Professors T. B. Mitchell, B. B. Fulton, R. O. Stevens; Associate Professors C. H. Bostian, F. H. McCutcheon, R. Harkema; Assistant Professors F. B. Meacham, C. F. Smith.

Teaching and Research. The space devoted to Zoölogy 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 the usual equipment, and has an especially large collection of breeding animals for research and instruction in the field.

Beekeeping.—The Beekeeping Laboratory is well provided with apparatus to illustrate all phases of beekeeping. A small apiary is maintained on the College grounds.

Graduate Work.—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.

Curricula. The Department of Zoölogy offers curricula in Entomology and in Wildlife Conservation and Management set forth as follows.

CURRICULUM IN ENTOMOLOGY

For Freshman and Sophomore Years refer to page 61.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Systematic Zoology, Zool. 421, 422, 423	3	3	3
Genetics, Zool. 411	4	0	0
Comparative Anatomy, Zool. 222, 223	0	4	4
Modern Language	3	3	3
Systematic Botany, Bot. 203	0	0	3
Physiological Chemistry, Chem. 451, 452	3	3	0
Public Speaking, Eng. 231	0	3	0
Technical Writing II, Eng. 323	0	0	3
Electives	6	3	3
	19	19	19

Senior Year

Vertebrate Embryology, Zool. 461	3	0	0
Field Zoology, Zool. 433	0	0	4
Applied Entomology, Zool. 401, 402, 403	3	3	3
Modern Language	3	3	3
Beekeeping, Zool. 243	0	0	3
Plant Ecology, Bot. 441	3	0	0
Histology, Zool. 442	0	3	0
Bacteriology, Bot. 402	0	4	0
Electives	4	4	4
	18	17	17

WILDLIFE CONSERVATION AND MANAGEMENT

Principles.—The Wildlife Management Curriculum is based on the following fundamental principles: (1) All forms of wild animal life must be considered in any extensive system of wildlife management; (2) the animal life of any given area is in close relationship to the vegetation existing in that area; (3) in favorable environment, the species of wildlife will normally produce a surplus, a part of which can be harvested each year in a manner similar to the harvesting of other crops.

Conservative Approach.—Since wildlife management is just getting under way in this country, it would not seem advisable to encourage too rapid expansion of this profession at the present time, although there is a distinct need for a moderate number of well-trained men to promote and supervise wildlife management in the many sections of the country.

Positions. The curriculum is designed to furnish a technical and practical background for the following types of positions: (1) Wildlife-Management Technicians in State Game and Fish Departments; (2) Biologists in the United States Biological Survey, Forest Service, Soil Conservation Service, National Park Service, and other Federal Land-Use Departments; (3) Game Managers on private preserves or leased areas, State game refuges, and on other land areas which are being developed primarily for wildlife.

Research.—Because of the great need for research and experimental work in this field, the required courses in the curriculum are also designed to give the basic technique necessary to students who may desire to enter this phase of wildlife management. Several elective courses will be available for junior and senior students to enable them to specialize in some particular phase of the work.

State Advantages. Unusual advantages are offered to competent students by the wide range of natural environments in the North Carolina Coastal Plain, Piedmont, and Mountain Regions. Further advantages are available by reason of close coöperation with the State Division of Game and Inland Fisheries, and the opportunity to observe developments in wildlife management on the following areas: Mount Mitchell Game Preserve, Sandhill Land-Use Project, Soil Conservation Service Projects, Mattamuskeet Water Fowl Preserve, The Nantahala and Pisgah National Forests, The Great Smoky Mountain National Park, and private preserves in the Piedmont and on the Coastal Plain.

CURRICULUM IN WILDLIFE CONSERVATION AND MANAGEMENT

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Mathematical Analysis, Math. 111, 112	0	4	4
General Zoology, Zool. 101	4	0	0
Economic Zoology, Zool. 102	0	4	0
Physical Geology, Geol. 120	0	0	4
Economic History, Hist. 101, 102, 103	3	3	3
Elementary Wildlife Management, Zool. 111	1	0	0
Military Science I, Mil. 101, 102, 103. or alternate	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	18	21	21

Sophomore Year

Agricultural Physics, Phys. 115	0	0	5
Botany, General and Systematic, Bot. 101, 102, 203	4	4	3
Introduction to Organic Chemistry, Chem. 221	0	0	4
Introduction To Economics, Econ. 205	3	0	0
Land Economics, Agr. Econ. 212	0	3	0
Public Speaking, Eng. 231	3	0	0
Comparative Anatomy, Zool. 222, 223	0	4	4
General Field Crops, F.C. 202	0	3	0
Ornithology, Zool. 251, 252, 253	2	2	2
Surveying, Theoretical, C.E. 221, 222	3	3	0
Surveying, Field, C.E. 225	1	0	0
Principles of Forestry, For. 111	3	0	0
Military Science II, Mil. 201, 202, 203, or alternate	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	22	22	21

Junior Year

Plant Propagation and Nursery Practice, Hort. 301	3	0	0
Dendrology, Bot. 211, 213	3	0	3
Plant Ecology, Bot. 441	3	0	0
Field Zoology, Zool. 433	0	0	4
General Bacteriology, Bot. 402	0	4	0
Economic Entomology, Zool. 213	0	0	4
Animal Physiology, Zool. 202	0	5	0
Wildlife Conservation, Zool. 321, 322, 323	3	3	3
Technical Writing II, Eng. 323	0	0	3
Soils, Soils 201	4	0	0
Electives	3	6	3
	19	18	20

Senior Year

Aquatic Biology, Bot. 473	0	0	2
Elective Social Science	3	0	0
Elective English	3	0	0
Wildlife Management, Zool. 451, 452, 453	3	3	3
The Soils of North Carolina, Soils 312	0	3	0
Advanced Animal Ecology, Zool. 462, 463	0	3	3
Parasitology, Zool. 492, 493	0	3	3
Electives	9	6	7
	18	18	18

THE AGRICULTURAL EXPERIMENT STATION

L. D. Baver, Director

Establishment.—The Agricultural Experiment Station was established in accordance with an Act of the General Assembly of 1877. Its progress has been enhanced by different Acts of Congress giving to the Station additional funds in 1887, 1906, 1925, and 1935. These are known as the Hatch, the Adams, the Purnell, and the Bankhead-Jones acts, respectively. The General Assembly has allocated to the Station annually certain funds from the general fund.

Purpose.—The purpose of the Agricultural Experiment Station is to study methods for economic production of the highest grades of livestock, poultry, and plants on the many soil types and varied conditions existing throughout the commonwealth; to study methods for the control of parasitic insects and organisms that cause serious economic losses of animals, poultry, and plants; to find and develop varieties of animals, poultry, and plants, new, and resistant to diseases and the changeable conditions prevailing in this State; and to perfect better marketing for all agricultural products.

Work. The staff of the Agricultural Experiment Station conducts experiments throughout the State on areas owned by farmers, on six strategically located test farms, on farms rented for short periods, and in the greenhouses and laboratories of the College.

Research. The agricultural research aims, through the discovery of new facts, to improve the well-being of farmers throughout the State; to strengthen the regulatory work of the State Department of Agriculture; to develop new and necessary facts for the teaching of sound agricultural principles by vocational agricultural instructors, agricultural extension agents, and agricultural instructors in the College.

Experts. The Agricultural Experiment Station staff brings to the College many experts, whose teachings in many specialized fields of agriculture assure the maintenance of curricula of high standards. It contributes much to the advanced training of students who are destined to become the leaders, teachers, and investigators so necessary in the maintenance of agriculture on sound and economic planes.

Publications.—The Agricultural Experiment Station publishes many bulletins and scientific papers on results of research conducted by the staff. These are free and sent upon request of anyone in the State.

Problems. The staff diagnoses and interprets many problems for the farmers of this State; holds council with farmers and others interested in the agricultural industry; discusses farming procedures over the radio, and writes many letters on the more specific problems of agriculture at the request of farmers, members of garden clubs, and of fertilizer, fungicide, and insecticide manufacturers. It takes part in many of the administrative functions of the College.

COOPERATIVE AGRICULTURAL EXTENSION WORK

Dr. I. O. Schaub, Director
John W. Goodman, Assistant Director
Dr. Jane S. McKimmon, Assistant Director
Ruth Current, State Home Demonstration Agent

Support.—The Agricultural Extension Service of State College is conducted coöperatively with the United States Department of Agriculture and the one hundred counties of the State. The work is supported by Federal funds derived from the Smith-Lever Act of 1914, the Capper-Ketcham Act of 1928, and the Bankhead-Jones Act of 1935. from State appropriations and county appropriations. The Federal and State appropriations are used to maintain an administrative and specialist staff, and to supplement salaries and travel expenses of county Extension agents.

Purpose. The purpose of the Extension Service is to teach by demonstration. In carrying out this purpose, the College maintains a staff of trained specialists, a system of county agents and assistant agents, and a corps of home-demonstration agents. Instruction is given at group meetings by method and result demonstrations, and by the written word, by training leaders, and through organized effort with clubs of men, women, and young people. In all of these activities, the plan is to carry the rural people of North Carolina the latest and best information obtainable for building a more prosperous and satisfying life on the farm. The Extension Service holds a number of short courses, both on the College campus and elsewhere over the State, that the greatest number of rural leaders may be trained for building better homes and better farms, in the use of more efficient practices. thus creating a more satisfying way of life.

THE SCHOOL OF ENGINEERING

Blake R. Van Leer, M.E., Dean of Engineering
Wallace C. Riddick, C.E., LL.D., Dean Emeritus of Engineering
William L. Mayer, M.S., Director of Registration

Organization

The School of Engineering of the North Carolina State College of Agriculture and Engineering of the University of North Carolina is organized for purposes of administration into the following Departments:

Line Departments

	Administrative Officer
Aeronautical Engineering	Professor L. R. Parkinson
Architectural Engineering	Professor Ross Shumaker
Ceramic Engineering	Professor A. F. Greaves-Walker
Chemical Engineering	Professor E. E. Randolph
Civil Engineering	Professor C. L. Mann
Electrical Engineering	Professor William Hand Browne, Jr.
General Engineering	Professor G. Wallace Smith
Geological Engineering	Professor J. L. Stuckey
Industrial Engineering	Professor H. B. Shaw
Mechanical Engineering	Professor L. L. Vaughan

Service Departments

Engineering Experiment Station	Professor Harry Tucker*
Engineering Mechanics	Professor G. Wallace Smith
Mathematics	Professor H. A. Fisher
Physics	Professor C. M. Heck

The School of Engineering is organized to offer technical and professional engineering instruction on the higher levels, undergraduate and graduate, vocational and professional, to meet the needs of the people of North Carolina. It is also organized and equipped to conduct research in the fundamentals of Engineering, and it coöperates with the College Extension Division in offering extension courses in Engineering and its allied fields.

Effective July 1, 1938, the consolidation of Engineering instruction at the University Unit in Raleigh was consummated, and the instructional staff and laboratory facilities were enhanced by additions from the Engineering College formerly maintained by the Unit at Chapel Hill. This gives the School of Engineering in Raleigh the largest and most extensive engineering staff and equipment in this section of the country, and offers to the young men of North Carolina excellent facilities for securing an undergraduate education in Engineering.

* On leave.

The excellence of the instruction in the School of Engineering is attested by the fact that the Engineers' Council for Professional Development has accredited its curricula in Ceramic, Civil, Electrical, and Mechanical Engineering. It is the policy of the School of Engineering to have all of its curricula meet the standards of this nationally recognized accrediting agency. Engineering education requires extensive laboratory facilities, and as rapidly as funds are available all of its laboratories are being brought into shape to meet the highest standards attained in any technological institution of higher learning.

Location and Facilities

Raleigh is a particularly favorable place for the study of Engineering. It is not only the State Capital where are located many State Departments of interest to engineers, such as the State Highway Commission, State Board of Health, State Geologist, Department of Conservation and Development, and important State institutions, but it is a rapidly growing city marked by modern developments in residential, commercial, and municipal construction. The local building and engineering go on the year round and afford excellent opportunities for observation and study. Raleigh is also so situated geographically that it is within easy distance for inspection trips to commercial chemical works, woodworking mills, railway shops, machine shops, airports, 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 on the Cape Fear River are within easy reach. The important systems of highways centering in Raleigh are exceptionally valuable for the observation and study of the construction, use, and maintenance of roads.

On the State College campus are six large buildings devoted exclusively to engineering instruction and research. These buildings contain much laboratory equipment which can be inspected at any time, but is best seen during the Engineers' Fair, which is held each year in March or April.

Purposes of the School

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

Occupations Open to Graduates

Those who graduate and receive a bachelor's degree in some specialized branch of engineering are equipped to assume at once the duties and responsibilities usually given Junior Engineers. The graduates of the School of Engineering are found in many technical fields, but most of them find employment in some one of the following: Aviation, Architectural and Structural Engineering; the Ceramic, the Chemical industries; and Private Professional Practice, Consulting Engineers; Hydro-electric Engineering, Electrical Manufacturing, Contracting, Central Electric Station Design and Construction, Telephone Service, Maintenance and Operation of Electrically-driven Mill Equipment, Lighting, Illumination, and Railway Signaling; Construction, Maintenance, and Operation of Steam and Electrical Railways; the Design and Manufacture of Machinery, the Operation of Shops, and the Furniture Industry; Geological Engineering, Highway Engineering, Industrial Engineering, and the Management of Industries, Municipal Engineering, Sanitary Engineering; as City Managers, Public-Utility and Health-Service Officials; Sales Engineering, Research Engineering.

Curricula

Besides a curriculum leading to the Bachelor of Science degree in General Engineering, the School of Engineering offers curricula which lead to the Bachelor's degree in the following specialized fields of Engineering:

Aeronautical Engineering
Architectural Engineering
Architecture
Ceramic Engineering
Chemical Engineering
Civil Engineering, with options in:
- (a) Construction
- (b) General Civil
- (c) Highway
- (d) Sanitary

Electrical Engineering, with options in:
- (a) Power Generation and Distribution
- (b) Electrical Communication

Geological Engineering
Industrial Engineering
Mechanical Engineering, with options in:
- (a) General
- (b) Furniture Manufacturing
- (c) Heating and Air Conditioning

All of the curricula contain courses of general educational value which prepare students for 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, serv ice, 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 years the students study English, Mathematics, Drawing, Shopwork, Physics. and Chemistry. In the junior and senior years the students are directed definitely to the professional aims in carefully considered and well-balanced curricula.

Summer Work.—At least six weeks of summer employment, approved by the Head of the Department in which the student is enrolled, 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 acquire the valuable experience of actual work with responsibility and pay in the field of his vocation. Departmental advisers will aid students in getting summer employment.

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 take the departmental inspection trips. None will be excused except for grave reasons.

These inspection trips are arranged by the Head of the Department in which the student takes his major work. The cost of such trips vary from $25.00 to $60.00 per student, depending on the time and distance traveled.

Degrees. Six different types of degrees may be secured through the School of Engineering. These are:

1. **Bachelor of Science** (B.S). This degree can be obtained only through completion of the curriculum in General Engineering. This is a course of study founded upon the fundamentals of engineering with no specialized courses but with liberal allowances for electives in the cultural courses. It is an earned undergraduate degree and can be obtained by four years of undergraduate work.

2. **Bachelor of a Specialized Branch of Engineering**, for example, B.C.E. Bachelor of Civil Engineering. This is an earned undergraduate degree which includes in the last two years some specialized courses in the particular branch of engineering in which the student is studying. This course is planned for four years of study; but due to the fact that it is very heavy and difficult, only the very best prepared and most diligent students can successfully complete it in four years.

3. **Master of Science** (M.S.) in a specialized branch of engineering. This is an earned graduate degree which can be obtained only after the Bachelor's degree. It requires at least one year of graduate work, a reading knowledge of at least one foreign language, and a thesis showing ability to pursue independent research. The core of graduate courses taken must emphasize a scientific objective. Further information concerning the requirements for this degree may be obtained by addressing Dr. Z. P. Metcalf, **Director of Graduate Studies, State College, Raleigh, N. C.**

4. **Master of a Specialized Branch of Engineering**, for example, (M.C.E.) Master of Civil Engineering. This is an earned graduate degree which can be obtained only after the specialized Bachelor's degree and requires one year of graduate work which emphasizes the technical and specialized professional engineering courses, and a thesis along professional engineering lines indicating ability to carry on independent professional investigations. For further information concerning this degree address Dr. Z. P. Metcalf, **Director of Graduate Studies, State College, Raleigh, N. C.**

5. **The Professional degree**, for example, Architectural Engineer, Ceramic Engineer, Chemical Engineer, Civil Engineer, Electrical Engineer, Mechanical Engineer.

This is an earned degree which is conferred only upon the graduates of some branch of the University of North Carolina, after five years of professional engineering practice in responsible charge of important work, the acceptance of a thesis on a subject related to the professional engineering practice in which the applicant is engaged, and the passing of an examination upon the candidate's professional experience. For further information concerning this degree address Dr. Z. P. Metcalf, **Director of Graduate Studies, State College, Raleigh, N. C.**

6. **The Honorary Degree of Doctor of Engineering** (D.Eng.). This degree is purely an honorary degree conferred upon men of extraordinarily high professional engineering attainments who are graduates of one of the branches of the University of North Carolina, or upon professional engineers who have rendered distinguished services to the State of North Carolina.

Graduation.—The requirements for graduation in a specialized branch of 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, with not less than 240 honor points.

Of the minimum of 240 term credits required for graduation in Engineering, 117 are common to all curricula: 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, and 6 in Hygiene and Physical Education.

Each of the curricula permits election of at least 18 term credits and contains not more than 72 special technical term credits.

Graduates in Liberal Arts.—An increasing number of graduates of liberal-arts colleges and universities are seeking an engineering degree. The policy of the School of Engineering is to allow as liberal an arrangement of courses as possible to suit the individual student's needs so that the degree in engineering may be obtained in the briefest time possible. However, the liberal-arts courses are distinctly different from those offered in an engineering school even when they have the same name and deal with the same subject matter. Students are therefore advised that the best economy of their time and money will be attained if they enroll at the beginning of their college careers as freshmen in an engineering curriculum.

A graduate with an A.B. degree will normally acquire two years additional work to obtain a Bachelor's degree in engineering.

A graduate with a B.S. degree may obtain a degree in engineering with from one to two years of additional study. A final decision in each case can be made only after an evaluation of the transcript of the student's record in the college from which he has received his degree.

Short Courses; Institutes.—The School of Engineering coöperates with the College Extension Division in offering short courses and institutes for adults and graduate engineers. These courses vary in length from one day to one week; each year the courses covered are different and vary according to the public demand. The faculty of the School of Engineering usually furnishes a large portion of the instruction offered in these courses, which in the past have been for Electrical Metermen, Gas Plant Operators, Waterworks Operators, Heating and Plumbing Contractors, Surveyors and Engineers. These short courses are usually held in Raleigh because the School of Engineering has unusual laboratory and classroom facilities which offer a decided advantage to those who desire to "brush up" on their specialty and bring themselves abreast of the times by attending such short courses. For information concerning any short course, address inquiry to Mr. Edward Ruggles, Director, Extension Division, State College, Raleigh.

ENGINEERING DEFENSE TRAINING

Since July 1940, the School of Engineering has been coöperating with the Office of Education of the Federal Government in offering Engineering Defense Training courses on a college level, designed to train men as rapidly as possible to enter the defense industries. The following courses have been offered: Aircraft Inspection; Chemical Testing and Inspection; Diesel Engineering; Engineering Drawing; Experimental Electronics; Instrument Men and Topographers; Materials Inspection and Testing; Production Engineering; Production Supervision; Spectroscopy in Industry and Architectural Drafting; Radio Communication; Power System Calculation; Indus-

trial Safety Engineering; Fabric Testing and Inspection; Electrical Distribution. Those who desire further information concerning these courses, please address their inquiries to: Edward W. Ruggles, Director, College Extension Division, N. C. State College, Raleigh, North Carolina. While college credit may not be earned by taking these courses, they do train men for specific tasks in which the salaries are attractive. Normally there is no cost to the student except room and board while attending. The average length of these courses is from ten to twelve weeks. Under the Engineering Defense Training Program sponsored by the U. S. Office of Education, North Carolina State College offered thirty-five courses and trained over eight hundred students, six hundred twenty-eight of whom successfully completed the courses and now have positions with Defense Industries. A total of thirty-five courses were offered, of which twenty-nine were pre-employment courses.

The School of Engineering has also coöperated during the past year with the U. S. Office of Education through the State Department of Public Instruction, Division of Vocational Education, and we have offered twenty-eight courses in such vocational fields as acetylene and electric welding, armature winding, sheet metal work, machine shop practice, etc. During the past year five hundred twenty two men were trained in these courses, most of whom are now employed with defense industries.

Admission; Advanced Standing.—Regulations for admission and advanced standing are stated under Information for Applicants.

SERVICE DEPARTMENTS

An explanation of the purposes, and a listing of the personnel engaged in the five Service Departments in the School of Engineering follow.

ENGINEERING MECHANICS

Professor G. Wallace Smith, Head of the Department

Associate Professor N. W. Conner; Assistant Professor C. E. Feltner*; Instructors J. T. Massey*, C. N. Gaylord, J. N. Farlow; Teaching Fellow W. T. Hunt.

The Department of Engineering Mechanics, which is housed in the Civil Engineering Building, teaches and administers the courses in theoretical and applied mechanics, strength of materials, and fluid mechanics. These courses have been grouped under an independent Department, which is the custom in most large engineering schools, for two reasons: first, to economize by preventing duplications and overlapping; second, because the mechanics courses are basic, required courses in all the engineering curricula, and here all engineering students meet on an equal footing. The best and most uniform results are thus obtained when such courses are taught in a Department completely separated from the bias of any particular type of specialization.

* On leave to U. S. Army.

FLIGHT TRAINING—FLYING

In coöperation with the Civil Aeronautics Administration, the School of Engineering through the Department of Aeronautical Engineering is offering to young men between the ages of 18 and 26 an opportunity to become licensed pilots.

In the past three years 230 primary and 69 secondary trainees have completed this flight training course; many of whom have joined the Army or Navy Air Corps with advanced standing.

Students wishing to receive flying instruction must pass a physical examination comparable to those of the Army and Navy Air Corps.

It is necessary that all flying students attend the ground school being offered. Navigation, Meteorology, and the Civil Air Regulations are subjects which must be mastered before the student may obtain a private flying license. Approximately two hours of ground instruction to every hour in the air is required. The 35 to 45 hours of flying is divided into stages so that about half of the time is dual instruction while the other half is solo practice.

Those students who successfully complete the Civil Pilot Training Course and receive a Private Pilot's Certificate may apply for advanced instruction. The ground instruction required for the advanced course includes Navigation, Meteorology, Parachutes, Aerodynamics, Aircraft Engines, Instruments and Radio. Forty to fifty hours of advanced flight instruction are given in high-powered aircraft. In the advanced course, approximately three hours of ground instruction to every hour in the air is required.

For detailed information, inquiries should be addressed to **Aeronautical Engineering Department, North Carolina State College, Raleigh, North Carolina.**

THE DEPARTMENT OF MATHEMATICS

Professor H. A. Fisher, Head of the Department

Associate Professors H. P. Williams, C. G. Mumford, J. M. Clarkson, J. W. Cell, R. C. Bullock, J. Levine, L. S. Winton; Assistant Professors H. V. Park, H. M. Nahikian; Instructors A. Gelbart, W. P. Seagraves, R. L. Anderson, Robert Hooke, Chas. W. Seekins, Chas. F. Strobel, H. C. Cooke, J. C. Bunn.

Mathematics is one of the basic sciences in Engineering. At State College the large and competent Mathematics Department not only teaches the subject as a science but gives also a large amount of drill and practice to the students so that, upon completion of the courses, the students not only know the subject matter but are skilled and rapid in its use when applied to the problems of technology.

THE PHYSICS DEPARTMENT

Professor C. M. Heck, Dead of the Department
Professor J. B. Derieux; Associate Professors J. S. Meares, F. W. Lancaster; Assistant Professors R. F. Stainback, G. W. Bartlett; Instructors J. I. Hopkins, W. H. Bessey, W. L. Parker.

Physics is another of the basic sciences upon which Engineering and Agriculture are founded.

Facilities.—The Department of Physics occupies the northern half of Daniels Hall—three floors, with six laboratories and six lecture rooms. The basement is devoted to research laboratories, shops, dark rooms, battery room, and power center. The two floors above comprise laboratories, lecture rooms, offices, and apparatus rooms.

Equipment. The Department is equipped with laboratory apparatus in a sufficient number of sets to permit all students in a laboratory to work during the same period on the same experiment. All lectures are demonstrated with a large assortment of equipment and apparatus collected through many years.

On the roof of the building is located the astronomical observatory and the radio-research laboratory. The five-inch telescope is equatorially mounted and driven by clock work.

The Department is equipped for research so that engineering students desirous of using Physics as a minor in their work for an advanced degree may do so.

THE ENGINEERING EXPERIMENT STATION

Professor Harry Tucker*, B.A., B.S., C.E., Director
Associate Professor James Fontaine, Assistant Director

Room 207, Civil Engineering Building, State College Station, Raleigh.

Establishment.—The Engineering Experiment Station of State College 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.

* On leave.

(c) The coördination of research 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.

Publications.—The Experiment Station has, since its organization, cooperated with various organizations and industries in the State in the investigation of problems peculiar to North Carolina. The results of such investigations have, from time to time, been issued in the form of Bulletins. The following is at present a complete list of the publications of the Station:

Bulletin No. 1. "County Roads: Organization, Construction and Maintenance," by Harry Tucker, James Fontaine, and L. D. Bell.

Bulletin No. 2. "Tests of Face and Common Brick Manufactured in North Carolina," by A. F. Greaves-Walker and James Fontaine.

Bulletin No. 3. "Poles from North Carolina Forests," by Wm. Hand Browne, Jr., and James Fontaine.

Bulletin No. 4. "Motor Vehicle Accidents in North Carolina," by Harry Tucker.

Bulletin No. 5. "Occurrence and Physical Properties of North Carolina Marble," by Jasper L. Stuckey and James Fontaine. Price twenty cents.

Bulletin No. 6. "The Occurrence, Properties, and Uses of the Commercial Clays and Shales of North Carolina," by A. F. Greaves-Walker, N. H. Stolte, and W. L. Fabianic. Price fifty cents.

Bulletin No. 7. "Highway Grades and Motor Vehicle Costs," by Howard Burton Shaw and James Fontaine. Price twenty cents.

Bulletin No. 8. "Financial Management for Highways," by Marc C. Leager. Price one dollar.

Bulletin No. 9. "Highway Accidents in North Carolina and Guides to Safety," by Harry Tucker. Price fifty cents.

Bulletin No. 10. "North Carolina Building Code," by the North Carolina Building Code Council. Price one dollar.

Bulletin No. 11. "The Production of an Insulating Brick Using North Carolina Shales," by A. F. Greaves-Walker, W. C. Cole, Jr., and S. C. Davis. Price twenty cents.

Bulletin No. 12. "The Development of Pyrophyllite Refractories and Refrac tory Cements," by A. F. Greaves-Walker, C. W. Owens, Jr., T. L. Hurst, and R. L. Stone. Price fifty cents.

Bulletin No. 13. "The Preparation of Concrete Using North Carolina Materials," by Harry Tucker and W. G. Geile.

Bulletin No. 14. "The Location and Distribution of the Ceramic Mineral Deposits of North Carolina," by A. F. Greaves-Walker and S. G. Riggs, Jr. Price twenty-five cents.

Bulletin No. 15. "A Study of Courses in Technical Writing," by A. M. Fountain. Price one dollar.

Bulletin No. 16. "The Production of Unfired and Fired Forsterite Refractories from North Carolina Dunites," by A. F. Greaves-Walker and R. L. Stone. Price fifty cents.

Bulletin No. 17. "Papers Presented at School for Street Superintendents, 1939," compiled by Harry Tucker.

Bulletin No. 18. "Net Revenue Method of Comparing Distribution Transformers," by R. R. Brown.

Bulletin No. 19. "The Origin, Mineralogy and Distribution of the Refractory Clays of the United States," by A. F. Greaves-Walker.

Bulletin No. 20. "Papers Presented at School for Street Superintendents, 1940," compiled by Harry Tucker.

Bulletin No. 21. "Drafting Room Practices," by T. C. Brown and P. E. Moose. Price twenty-five cents.

Bulletin No. 22. "The Development of an Unfired Pyrophyllite Refractory," by A. F. Greaves-Walker and J. J. Amero. Price fifty cents.

Current Activities.—The Experiment Station is now assisting in the following investigations that are being conducted by the several Departments of the Engineering School:

1. In coöperation with the Department of Chemistry of State College and the Medical School of Duke University: A study of night blindness in relation to automobile accidents.
2. In coöperation with the United States Geological Survey: The geology of Wake County, North Carolina.
3. In coöperation with the North Carolina State Highway and Public Works Commission: Investigation of steel-beam bridges with concrete floors.
4. In coöperation with the North Carolina State Board of Health: The efficiency of small sewage-treatment plants.
5. In coöperation with the Carolina Power and Light Company: Insulation drying with refrigerated air.
6. In coöperation with the Rural Electrification Administration: The effects of varying voltages on single-phase motors.
7. In coöperation with the Testing Division of the North Carolina Department of Revenue: The testing of motor fuels.
8. The stabilization of dolomite by the addition of olivine for refractories purposes.
9. In coöperation with the United States Bureau of Mines: The development of forsterite refractories.
10. In coöperation with the Tennessee Valley Authority: An investigation of the mineralogical composition of olivine.
11. Production of an insulating refractory from pyrophyllite.
12. In coöperation with the City of Raleigh, North Carolina: An investigation of the design and capacity of gutter intakes.
13. In coöperation with the Carolina Power and Light Company: Annealing of copper conductors by fault currents.

THE N. C. STATE COOPERATIVE PLAN OF ENGINEERING EDUCATION

*Frank F. Groseclose, Director; D. E. Henderson, Acting Director

The N. C. State Coöperative Plan of Engineering Education was started at North Carolina State College in the spring of 1940. It offers candidates for engineering degrees the combination of practical experience in industry and theoretical instruction in the required technical courses. During the first year 40 students coöperated with 12 industries in three states.

The N. C. State Coöperative Plan divides the coöperative students in two sections. One section attends college from September to March each year, then works with a coöperating industry from March to September. The alternate section attends college from March to September and works in industry from September to March. For the average student this will mean one additional year or a total of five years for graduation in engineering. The student's participation in this five-year program is as follows: The full Freshman year is spent in residence at the college. The regular Sophomore and Junior years are divided into alternate periods of college attendance and work of six months duration each. The student spends his entire Senior year in residence at college.

During the Freshman year, students following the Coöperative Plan will pursue the same schedule of full time attendance in the Basic Division as students of the regular four-year curricula. The coöperative students normally take exactly the same academic work as non-coöperative students. Liberal substitutions may be allowed in preparing students for specific jobs in industry.

In order to provide for worthy persons now employed in industry, whose employers are willing to coöperate, arrangements are available which allow these men to enter as Freshmen in the Basic Division, provided, of course, they meet the entrance requirements of N. C. State College. For those in industry who have already completed some college work, a transcript of college credits must be submitted to the Registration Office for evaluation. Such persons would complete at State College only the necessary additional credits required for an engineering degree. Those already employed in industry may be recommended to the college by their employers as suitable persons for pursuing or continuing college grade work.

Only Freshmen who can meet the scholastic requirement of a better than "C" average are eligible for participation in the Coöperative Plan. The maintenance of this policy avoids college recommendation to the industry of a student who would have to be suspended on account of poor scholarship, with consequent interruption of his employment with industry.

Employment under the coöperative plan is not guaranteed, but every effort is made to place all worthy students whose scholarship, character, and abilities indicate that they will be successful in pursuing the coöperative plan.

---

* On leave to U. S. Army.

Placement in industry is generally made by furnishing to the industry concerned a few applications of the students selected by the Director as most likely to fit the particular needs of the industry. In some cases the industries have authorized the Director to make assignment of students to them based on specification submitted by the particular industry.

College fees, under the coöperative plan, are the same as those listed in the catalog for other students, except for coöperative students in college attendance during the winter quarter. A reduction in the January payment will be made on pro rata basis on account of non-attendance in the spring quarter.

Applications for admittance to the coöperative plan may be made at any time, preferably before April 1 of the Freshman year.

Those interested should communicate directly with Mr. D. E. Henderson, Acting Director, N. C. State Coöperative Plan of Engineering Education, Room 129-1911 Building, State College Station, Raleigh, N. C.

CURRICULA OFFERED IN THE SCHOOL OF ENGINEERING

Each of the following curricula is not only well balanced, but offers a liberal course of study in a technical and professional field. Each conforms to what is regarded by engineering educators as the best modern practice.

Also offered in the School of Engineering is a curriculum leading to the Bachelor of Science degree in Engineering (see page 114). This curriculum has no specialization and requires but 231 term credits with at least 231 honor points. It is recommended to those who desire a broad general training in the basic principles of Engineering but who do not have the time or desire to specialize in some particular branch.

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, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Engineering Drawing II, M.E. 105, 106	3	3	0
Descriptive Geometry, M.E. 107	0	0	3
Military Science I, Mil. 101, 102, 103, or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	19	19	19

Summer requirement following the freshman year in Architectural, Ceramic, Electrical Engineering, and Mechanical Engineering: Surveying, C.E. s200, 3 credits.

Citizenship Requirement for All Curricula in Engineering

In order that every graduate of the School of Engineering may have a working knowledge of the fundamentals of American Government, all students in the School of Engineering are required to take prior to the end of their sophomore year a citizenship test, and in the event a student fails to pass this comprehensive examination, he will be required to take

American Government (Political Science 200) 3 or 3 or 3. Students may elect to take the course in lieu of the examination, and students taking the course will be permitted to apply the credit earned in partial satisfaction of their social science electives. A student must pass the comprehensive examination or the course in American Government before he can graduate from the School of Engineering.

AERONAUTICAL ENGINEERING

Associate Professor L. R. Parkinson, Head of the Department; Instructors in Flight Training W. R. Mann and W. G. Friedrich; Assistant Professor R. F. Rautenstrauch.

Building and Equipment.—The Department of Aeronautical Engineering has a new building centrally located on the campus. It contains the offices of the aeronautical faculty and the aeronautical laboratory. The Aeronautical Engineering Department operates the University-owned Horace Williams Airport at Chapel Hill. This airport, one of the largest in the south and the finest college airport in the country, is capable of handling aircraft of any size. The Department offers flying instruction in the University aircraft under the supervision of the department personnel. A certificated mechanic and two helpers maintain the equipment in airworthy condition. A five-room house on the airport serves as office and lounge. An airport near the State College campus, which will serve the School of Engineering, is under survey. Flying instruction under C.A.A. supervision is also available at Raleigh Municipal Airport through the Department and Serv-Air, Inc.

The Aeronautical Laboratory provides for static testing of all aircraft components. Flow analysis work is carried out in a specially designed channel. Being a new laboratory, it is equipped with the latest machines and instruments. All types of aircraft instruments are available for study, experiment and test.

Aircraft engines, both air and liquid cooled, are available to study, test and research. In this connection, the use of an electric dynamometer plays an important part. The U. S. Army Air Corps has provided engine parts and components for study and test.

Curriculum.—The tend of airplane design changes quite rapidly; for this reason, no attempt is made to produce specialists in any phase of aeronautical engineering. The course of study is designed to give the student a well-rounded knowledge of aeronautics with special emphasis on the fundamentals. Such a curriculum permits the students to specialize in any one of the fifty phases of aeronautics. Because of the experience in airport construction and operation, the department is especially qualified to offer a course in Air Transportation which includes these important phases. Graduates readily find positions with the various aircraft and engine manufacturing companies, The National Advisory Committee for Aeronautics, and the Army and Navy Air Services.

CURRICULUM IN AERONAUTICAL ENGINEERING

For the Freshman Year, refer to page 104.

Summer requirement following the freshman year: Surveying, C.E. s200, 3 credits.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
†Business English, Pub. Speaking, Lit., Eng. 211, 231, 261, 267	3	3	3
Physics for Engineers, Phy. 201, 202, 203	4	4	4
Mechanical Drawing, M.E. 211, 212, 213	2	2	2
Shopwork, M.E. 121, 122, 123	1	1	1
Engineering Mechanics, E.M. 311, 312	0	3	3
General Aeronautics, Aero. E. 210	3	0	0
*Military Science, Mil. 201, 202, 203	2	2	2
Physical Education, P.E. 201, 202, 203	1	1	1
	20	20	20

Junior Year

Engineering Mechanics, E.M. 313	3	0	0
Thermo., M.E. 307, 308, 309	3	3	3
Thermo. Lab., M.E. 313, 314, 315	1	1	1
Elem. Mechanism, M.E. 215, 216, 217	1	1	1
Elem. Aeronautics, Aero. E. 310	0	0	3
Materials of Construction, C.E. 321	3	0	0
Metallurgy, M.E.	0	3	3
Str. of Materials, E.M. 321, 322	0	3	3
Fluid Mechanics, E.M. 330	0	3	0
Tech. Writing, Eng. 321	0	0	3
Business Law, Econ. 307	3	0	0
Elements of E.E.I., E.E. 320, 321	3	3	0
**Electives	3	3	3
	20	20	20

Summer requirement: 6 weeks industrial employment or 10 hours solo flying.

Senior Year

General Economics, Econ. 201, 202, 203	3	3	3
Internal Comb. Engines, M.E. 421, 422, 423	3	3	3
Airplane Design, Aero. E. 421, 422, 423	3	3	3
Aerodynamics, Aero. E. 431, 432, 433	3	3	3
Aero. Lab., Aero. E. 441, 442, 443	1	1	1
Aircraft Engines, Aero. E. 451, 452	3	3	0
Air Transportation, Aero. E. 332, 333	0	3	3
**Electives	3	3	3
	19	22	19

All Seniors are 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 Modern Language for the courses listed.

* Or 6 credits in one or two of the following departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

ARCHITECTURE AND ARCHITECTURAL ENGINEERING

Professor Ross Shumaker, Head of Department
Associate Professor J. D. Paulson; Assistant Professor F. Carter Williams
Assistant Professor W. L. Baumgarten
Instructor James H. Grady

The courses in Architecture and Architectural Engineering have been arranged after careful study of the best curricula offered by the leading educational institutions in the United States. These studies and many years of practical experience on the part of the faculty—both in the profession and in teaching, enable this Department to offer two allied courses of merit, proved by the very high proportion of graduates of this Department who successfully follow the profession of architect.

The first three years of study in Architecture and in Architectural Engineering are very similar so arranged that a student may transfer from one curriculum to the other until the end of the junior year—with a minimum loss of credits. After the third year, however, there is a wide divergence in the courses.

Architecture is one of the most valuable and constructive professions in modern civilization. While an art, it must be firmly rooted in science; and the greater the project, the more positively this is true. Consequently, a student who is ambitious to be a great architect must master the artistic scope of architecture and also such science as is pertinent. To compress such a course into four years would necessarily eliminate some essential studies or reduce the content of all. Therefore the curriculum in Architecture is presented as a five-year course of study.

Architectural Engineering is designed to prepare students for the pursuit of engineering as allied with architecture. Modern architecture has so many engineering aspects as in construction, fabrication and use of materials, provision of conveniences, that a student may well plan to specialize in some one of these fields. This four-year course provides a thorough training in the theoretical engineering of architecture and a sufficient knowledge of architecture as an art to enable the graduate to pursue any specialized branch he may select. Also it is possible for him to continue in the field of architecture and eventually obtain registration as a licensed architect.

Equipment.—The Department of Architecture and Architectural Engineering occupies the third floor of Daniels Hall, an excellent location providing adequate space in well-lighted and comfortable rooms. Large drawing rooms, library, lecture rooms, photographic dark room, and offices, overlooking the entire State College Campus, constitute an ideal physical layout for the Department. Drawing tables, stools, lockers, and essential furniture are all provided.

Alumni.—Graduates of this department have little difficulty in normal times in finding employment and experience such that in a few years they can obtain registration as licensed architects. Many graduates have been conspicuously successful, and it is worthy of note that a very large proportion remain in the State of North Carolina or adjacent territory.

CURRICULUM IN ARCHITECTURAL ENGINEERING

For the Freshman Year, refer to page 104.

Surveying, C.E. s200, 3 credits, is required in the summer immediately following the freshman year.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
*Business English, Public Speaking and English or American Literature, Eng. 211, 231, (261 or 262 or 263) or (265 or 266 or 267)	3	3	3
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering Mechanics, E.M. 311, 312	0	3	3
Elements of Architecture I, II, III, Arch. 201, 202, 203	3	3	3
Shades and Shadows, Arch. 205	2	0	0
Pencil Sketching, Arch. 100	1	1	1
Perspective Drawing, Arch. 206	1	0	0
Military Science II, Mil. 201, 202, 203 (or elective†)	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
Sophomore Year	21	21	21

Junior Year

Engineering Mechanics, E.M. 313	3	0	0
Strength of Materials, E.M. 321, 322	0	3	3
Materials Testing Laboratory, H.E. 322	0	1	0
Materials of Construction, C.E. 321	0	0	3
Sanitary and Mech. Equipment of Buildings, C.E. 365, 366	3	3	0
General Economics 201, 202, 203	3	3	3
Freehand Drawing 1, 2, 3, Arch. 101, 102, 103	2	2	2
Photographic Practice, Arch. 304	0	0	1
Intermediate Design B-1, B-2, B-3, Arch. 301, 302, 303	3	3	3
History of Architecture 1, 2, 3, Arch. 321, 322, 323	3	3	3
**Electives	3	3	3
Junior Year	20	21	21

Summer requirement: 6 weeks industrial employment.

Senior Year

Reinforced Concrete, C.E. 421, 422	3	3	0
Graphic Statics, C.E. 423, 424, 425	1	1	1
Theory of Structures, C.E. 431a, 432a	3	3	0
Specifications, Arch. 416	0	0	3
Building Materials I, Arch. 409	3	0	0
Electrical Equipment of Buildings, E.E. 343	0	0	3
Business Law, Econ. 307	3	0	0
Architectural Design, E-1, E-2, Arch. 351, 352	3	3	0
Architectural Office Practice, Arch. 411, 412	0	3	3
Architectural Estimates, Arch. 408	0	0	2
Structural Design, C.E. 426, 427	0	3	3
History of Sculpture and Mural Decoration, Arch. 325	0	0	2
**Electives	3	3	3
Senior Year	19	19	20

Total credits required for completion of course: 243. Degree: Bachelor of Architectural Engineering.

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 course listed French, M.L. 101.

† Or six credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

CURRICULUM IN ARCHITECTURE

Freshman or First Year

COURSES	CREDITS First Term	Second Term	Third Term
Mathematics 101, 102, 103	6	6	6
Composition, Eng. 101, 102, 103	3	3	3
French, or Modern Language, M.L. 101, 102, 201, or Equiv.	3	3	3
Pencil Sketching, Arch. 100	1	1	1
World History, Hist. 104	2	2	2
Architectural Drawing, Arch. 107 (or M.E. Equivalent)	3	3	0
Descriptive Geometry, M.E. 107	0	0	3
Military Science I, Mil. 101, 102, 103 (or elective†)	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
Freshman or First Year	21	21	21

Summer Requirements: Surveying, C.E. s200, 3 credits.

Sophomore or Second Year

Calculus I, II, III, Math. 201, 202, 303	4	4	4
Background for Modern Thought (or Elective)	3	3	3
Physics for Engineers, Phys. 201, 202	4	4	0
Shades and Shadows, Arch. 205	2	0	0
Engineering Mechanics, E.M. 301, 302	0	3	3
Elements of Architecture I, II, III, Arch. 201, 202, 203	3	3	3
History of Sculpture and Mural Decoration, Arch. 325	0	0	2
Working Drawings, Arch. 305	0	0	2
Perspective Drawing, Arch. 206	1	0	0
Military Science II, Mil. 201, 202, 203 (or elective†)	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
Sophomore or Second Year	20	20	20

Junior or Third Year

Business English, Pub. Speaking, Literature (or M.L.)	3	3	3
Strength of Materials, E.M. 321, 322	0	3	3
Materials Testing Laboratory, H.E. 332	0	1	0
Materials of Construction, C.E. 321	3	0	0
Sanitary and Mech. Equip. of Buildings, C.E. 364	3	0	0
Freehand Drawing 1, 2, 3, Arch. 101, 102, 103	2	2	2
Architectural Office Practice, Arch. 411, 412	0	3	3
Intermediate Design, B-1, B-2, B-3, Arch. 301, 302, 303	3	3	3
History of Architecture 1, 2, 3, Arch. 321, 322, 323	3	3	3
**Electives	3	3	3
Junior or Third Year	20	21	20

Summer Requirements: Six Weeks Industrial Employment.

Senior or Fourth Year

General Economics, Econ. 201, 202, 203	3	3	3
Reinforced Concrete C.E. 421, 422	3	3	0
Graphic Statics, C.E. 423, 424, 425	1	1	1
Electric Equipment of Buildings, E.E. 343	0	0	3
Architectural Design B-4, B-5, B-6, Arch. 353, 354, 355	6	6	6
History of Architecture 4, Arch. 421	0	3	0
Building Materials, Arch. 409	3	0	0
Professional Practice, Arch. 414	0	0	1
Clay Modeling, Arch. 114	1	1	1
Photographic Practice, Arch. 304	0	0	1
**Electives	3	3	3
Senior or Fourth Year	20	20	19

† Or six credits in one or two of the following departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

Professional or Fifth Year

COURSES	CREDITS First Term	Second Term	Third Term
Business Law, Econ. 307	3	0	0
Specifications, Arch. 416	0	0	3
Theory of Structures, C.E. 431a, 432a	3	3	0
Architectural Design A-1, A-2, A-3, Arch. 401, 402, 403	6	6	6
Freehand Drawing 4, 5, 6, Arch. 211, 212, 213	3	3	3
Architectural Composition, Arch. 407	2	0	0
City Planning, Arch. 415	0	2	0
Architectural Estimates, Arch. 408	0	0	2
**Electives	3	6	6
Fifth Year	20	20	20

Total Credits: 306. Completion of the course to be recognized by granting the degree of Bachelor of Architecture.

All seniors will be required to go on the inspection trip as part of their curriculum.

CERAMIC ENGINEERING

Professor A. F. Greaves-Walker, Head of the Department
Associate Professor R. L. Stone; Instructor J. N. Smith, Jr.

The Department of Ceramic Engineering occupies its own building, which contains classrooms, a design room, a chemical laboratory, an equipment laboratory, and a kiln laboratory.

The Equipment Laboratory contains an adequate variety of machines for preparing and processing ceramic bodies of all kinds and making ceramic products on a laboratory scale. It also contains the necessary equipment for carrying on ceramic research, and the testing of materials and products.

The Kiln Laboratory contains eleven kilns and furnaces of different types, which provide for the firing or testing of all ceramic materials and products.

Ceramic Engineering includes those phases of engineering which have to do with the study of the nonmetallic minerals, except fuels and ores as such, and the manufacture of products therefrom. The nonmetallic minerals compose over 90 per cent of the earth's surface, and the industries based on them rank above the automobile, and the iron and steel industries, in value of product. Principal among these products are those made of clay and associated minerals, 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 others in the United States; with the introduction of modern processes and methods will produce in 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 fewer than 100 ceramic engineers graduated in the United States each year. It is with the idea of supplying this demand

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

and developing the latent resources of North Carolina that a four-year curriculum in Ceramic Engineering, leading to the degree of Bachelor of Ceramic 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 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, Advanced Silicate Technology, Glass Technology, and Ceramic Research.

The curriculum in Ceramic Engineering, which has been accredited by the Engineers Council for Professional Development, contains fundamental courses, and courses in Ceramic, Geological, Civil, Electrical, and Mechanical Engineering, as well as in 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, equip ment manufacturers, consulting engineers, and ceramic chemists and tech nologists. Graduates of the Department at State College, which ranks fourth in registration in the United States, are successfully holding positions in all of these branches.

CURRICULUM IN CERAMIC ENGINEERING

For the Freshman Year, refer to page 104.

Surveying, C.E. s200, 3 credits, is required in the summer immediately following the freshman year.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212	0	4	0
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering Geology, Geol. 220	3	0	0
Mineralogy, Geol. 230	0	0	3
*Business English, Public Speaking, and English Literature, Eng. 211, 231, 261	3	3	3
Ceramic Materials, Cer. E. 102	0	3	0
Ceramic and Mining Processes, Cer. E. 103	0	0	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	21	20

* 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.

† Or 6 credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Engineering Mechanics, E.M. 301, 302	3	3	0
Strength of Materials, E.M. 321	0	0	3
General Economics, Econ. 201, 202, 203	3	3	3
Mechanical Drawing, M.E. 212, 213	0	2	2
Drying Fundamentals and Practice, Cer. E. 201	3	0	0
Firing Fundamentals and Practice, Cer. E. 252	0	3	0
Ceramic Calculations, Cer. E. 253	0	0	3
Ceramic Products, Cer. E. 203	0	0	3
Engineering Thermodynamics I, M.E. 305, 306	3	3	0
Mechanical Engineering Laboratory I, M.E. 311, 312	1	1	0
Materials Testing Laboratory, H.E. 332	0	0	1
Thermal Mineralogy, Geol. 338	0	3	0
Physical Chemistry, Chem. 331	5	0	0
Business Law, Econ. 307	0	0	3
**Electives	3	3	3
	21	21	21

Summer requirements: Six weeks industrial employment.

Senior Year

Refractories, Cer. E. 403	0	0	3
Silicates, I and II, Cer. E. 303, 304	3	3	0
Ceramic Laboratories, Cer. E. 311, 312, 313	3	3	3
Ceramic Designing, Cer. E. 314, 315	0	4	4
Pyrometry, Cer. E. 305	1	0	0
Technical Writing I, Eng. 321	3	0	0
Elements of Electrical Engineering I, E.E. 320, 321	0	3	3
Strength of Materials, E.M. 322	3	0	0
Optical Mineralogy, Geol. 431, 432, 433	3	3	3
**Electives	3	3	3
	19	19	19

All seniors are required to go on the inspection trip as part of their curriculum.

CHEMICAL ENGINEERING

Professor E. E. Randolph, Head of the Department

Professor B. E. Lauer*; Associate Professor W. G. Van Note; Assistant Professors W. A. Bain, T. C. Doody; Instructor J. F. Seely; Teaching Fellow C. L. Dickinson; Assistants E. B. Finch, J. A. Macon.

Facilities.—The laboratories of the Department of Chemical Engineering are in Winston Hall. They consist of a unit operations laboratory; 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 micro-photographic 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 prob-

* On leave to U. S. Army.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

lems 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, microscopes, 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 orifices, venturi meters, pitot tubes, a weir and 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 softening equipment forms a unit of an experimental water-purification and -treatment system. In addition the nearby industrial plants offer opportunity for study of plant operation and problems.

Recently added to the Department of Chemical Engineering is a valuable exhibit room, where products of many chemical engineering industries are exhibited and used for instruction. They 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.

Curriculum.—This curriculum provides thorough training in unit operations and unit processes, and in the methods of manufacturing industrial chemical products on a large scale. It includes basic courses in Chemistry, Physics, Mathematics, and fundamental Engineering as a background for the professional Chemical Engineering training of this Department, so that the graduate is prepared to enter any field of applied chemical work as a junior engineer.

The Chemical Engineer is expected to determine the process, the material, the design, and the economic capacity of the equipment needed. Efficient production requires exact control in every stage of the process. He must devise efficient and economical methods, discover sources of loss and the remedy, recover by-products, convert waste products, and make industrial calculations of input, output, efficiency, quality, and cost.

North Carolina is a center of chemical industries in the South, with an annual output estimated at approximately one-fourth billion dollars. Some of the largest chemical industries of the country are located in this State, manufacturing such products as paper, fertilizers, vegetable oils, food products, leather, bromine, aluminum, metallurgical products, paints and varnishes. Such industries require properly trained Chemical Engineers. Chemical Engineering offers therefore inviting opportunities to render distinct service to the welfare and comfort of the people.

Graduates find employment in such fields as control work and industrial research; as technologists, superintendents of chemical industries, municipal engineers, engineers in the State and Federal health service, consulting chemical engineers, manufacturers of chemicals and of chemical equipment, chemical salesmen and representatives, developers of new chemical industries.

Ninety-three per cent of the graduates of this Department are successfully engaged in Chemical Engineering work. Because chemical problems are intricate, and scientific chemical-control work in industries is required, salaries for Chemical Engineering graduates are inviting. Many graduates of this Department now hold very responsible positions.

The Department coöperates with the State Departments in their chemical problems. Facilities are available for graduate work, upon which emphasis is placed.

CURRICULUM IN CHEMICAL ENGINEERING

For the Freshman Year, refer to page 104.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, any one of (261-267)	3	3	3
Introduction to Chemical Engineering, Chem. E. 201, 202, 203	1	1	2
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212, 213	0	4	4
Shopwork, M.E. 122, 123	1	1	0
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	20	20	20

Junior Year

Engineering Mechanics, E.M. 301, 302	3	3	0
Strength of Materials, E.M. 320	0	0	3
Organic Chemistry, Chem. 421, 422, 423	4	4	4
Chemical Engineering I, Chem. E. 311, 312, 313	3	3	3
Industrial Stoichiometry, Chem. E. 331	0	0	3
Chemical Engineering Laboratory I, Chem. E. 321, 322, 323	1	1	1
Physical Chemistry, Chem. 431, 432	4	4	0
Fluid Mechanics, E.M. 330	0	0	3
Elements of Electrical Engineering I, E.E. 321, 322	3	3	0
Machine Shop I, M.E. 225, 226	1	1	0
Electives	3	3	3
	22	22	20

Summer requirement: Six weeks industrial employment.
** Pilot Plant Practice—3 credits.

* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed German, M.L. 102.

† Or 6 credits in one or two of the following Departments: Economics, Psychology, History, Modern Language, Sociology.

** Elective Summer of 1942.

Senior Year

Principles of Chemical Engineering, Chem. E. 411, 412, 413	3	3	3
Water Treatment, Chem. E. 421	3	0	0
Chemistry of Engineering Materials, Chem. E. 422	0	3	0
Electrochemical Engineering, Chem. E. 423	0	0	3
Chemical Engineering Lab. and Design II, Chem. E. 431, 432, 433	2	2	2
Heat Engineering II, M.E. 301, 302	3	3	0
Mineralogy, Geol. 230	0	0	3
General Economics, Econ. 201, 202, 203	3	3	3
Elementary Modern Physics, Phys. 307	3	0	0
‡Technical Writing I, Eng. 321	0	3	0
‡Business Law, Econ. 307	0	0	3
Electives	3	3	3
	20	20	20

All seniors are required to go on the inspection trip as part of their curriculum.

CIVIL ENGINEERING

Professor C. L. Mann, Head of the Department
Professors B. R. Van Leer, W. C. Riddick, Harry Tucker*, T. S. Johnson*
Associate Professors C. R. Bramer, James Fontaine, F. W. Pearce
Assistant Professor C. M. Lambe; Instructor W. F. Babcock.

The Department of Civil Engineering is located in the Civil Engineering Building in which the offices, classrooms, laboratories, and instrument rooms were designed and built to provide suitable facilities for efficient teaching and laboratory demonstrations.

The equipment common to general civil engineering includes surveying instruments, transits, levels, plane tables, current meters, sextants, planimeters, calculating machines, blueprint apparatus, lantern slides, and moving-picture machine. Special equipment includes precise surveying instruments and such equipment as Beggs deformeter and other of this class.

The equipment in the Materials-Testing Laboratory, in the Cement- and Bituminous-Materials-Testing Laboratory, and in the Sanitary Laboratory, fully meet the present-day requirements for laboratory instruction.

Soil mechanics is a new course in the curriculum. A laboratory for this course has been furnished and equipped with the newest apparatus now used in laboratories engaged in the study of the action of soils relative to engineering problems dealing with structures, foundations, and highway subgrades.

Civil Engineering is the oldest and most general of all the branches of modern engineering; in fact, from it all of the others have developed. The usefulness of Civil Engineering is so well recognized that a student who does not have a strong predilection for some other special branch may be safely advised to study Civil Engineering.

The Civil Engineering curriculum in the School of Engineering has been accredited by the Engineers' Council for Professional Development. It is a

* On leave.
‡ With the approval of the adviser, courses in Education, English, History and Political Science, German, Advanced Mathematics, Botany, may be substituted for Technical Writing, and Business Law.

well balanced course of study, upon the completion of which a young man is equipped to assume the duties of junior engineer in any of the following important fields: design, construction, operation, or testing of water-power developments, railroads, highways, water supplies, sewerage systems.

The Civil Engineering Department offers a student the choice of the following options:

General Civil
Construction
Highway
Sanitary

The first two years of these curricula are the same. They begin to differentiate slightly in the junior year and more decidedly in the senior year; essentially, however, they are the same and are designed to develop in the student engineer a well-trained mind, one which reasons logically, accurately, quickly. This is accomplished by a thorough training in applied mathematics and physics, which is supplemented with practical work in the field, drafting rooms, and laboratories.

More men are practicing Civil Engineering in North Carolina than any other branch of engineering, and it is to train young men to serve under those already in the profession and subsequently to follow in their footsteps that the Civil Engineering curricula are offered.

City Management. Students in Civil Engineering may by proper selection of their electives during the junior and senior years prepare themselves for work eventually leading to the position of City Manager.

CONSTRUCTION ENGINEERING

Professor C. R. Bramer, Faculty Adviser

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 increased demands of the future. 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, courses in Architecture, 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; particular emphasis is placed upon estimating, modern methods, and management of operations.

This curriculum is designed to prepare the students to enter the work of actual construction of modern buildings and to lay a foundation for future work as owners, managers, or executives in the construction industry.

The equipment available for instruction in Construction Engineering consists of a large file of complete plans and specifications for various types of structures, many samples of different building materials, lantern slides illustrating methods of construction, and a comprehensive file of trade literature and publications. The equipment of the entire Department of Civil Engineering is available for instruction.

HIGHWAY ENGINEERING

Professor Harry Tucker*, Faculty Adviser

North Carolina has during the past twenty years, made remarkable progress in the building of good roads. Most of the counties and cities in the State have also spent large sums in road construction and maintenance.

The building of roads and their proper maintenance are engineering problems to be handled by technically trained men. 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.

State College 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 most of the different types of road surfaces; the laboratories of the State Highway and Public Works Commission are available for inspection, and numerous experimental sections of road periodically being constructed by the Commission near Raleigh can be examined.

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 Civil Engineering Building is well-equipped for testing all materials used in road building; there is full field equipment for surveys and modern drawing rooms are provided with the necessary furniture and instruments. There is also a large lecture room fitted for the use of lantern slides and motion pictures.

SANITARY ENGINEERING

Professor T. S. Johnson*, Faculty Adviser

Because Sanitary Engineering so vitally concerns the health of the people, and because of the progress in North Carolina in this field, the demand for men trained in Sanitary Engineering has increased.

* On leave.

The Sanitary Engineering option is offered to meet this need. 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 is 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; 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 an opportunity 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 hold 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 CIVIL ENGINEERING

General Civil Engineering	Construction Engineering
Highway Engineering	Sanitary Engineering

For the Freshman Year, refer to page 104.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, and III, Math. 201, 202, 303	4	4	4
*Business English, Public Speaking, Eng. 211, 231, and one term English or American Literature	3	3	3
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering Geology, Geol. 220	3	0	0
Theoretical Surveying, C.E. 221, 222, 223	3	3	3
Field Surveying, C.E. 225, 227	1	0	1
Mapping, C.E. 226	0	1	0
Engineering Mechanics, E.M. 311, 312	0	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	21	21

Surveying, C.E. s310, concurrent with Summer School, 3 credits.

* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Elementary French, M.L. 101, 102, 201, or an equivalent.

† Or 6 credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

Junior Year

Required

COURSES	CREDITS First Term	Second Term	Third Term
Elements of Electrical Engineering I, E.E. 320, 321	3	3	0
Engineering Mechanics, E.M. 313	3	0	0
Strength of Materials, E.M. 321, 322	0	3	3
Materials of Construction, C.E. 321	3	0	0
Highway Engineering I, H.E. 322, 323	0	3	3
General Economics, Econ. 201, 202, 203	3	3	3
	12	12	9

Choice must be made of one of the following:

GENERAL CIVIL OPTION

Fluid Mechanics, E.M. 330	0	3	0
Hydraulics, C.E. 443	0	0	3
Heat Engineering II, M.E. 303	0	0	3
Technical Writing I, Eng. 321	3	0	0
Electives	3	6	3
	18	21	18

HIGHWAY OPTION

Fluid Mechanics, E.M. 330	0	3	0
Hydraulics, C.E. 443	0	0	3
Heat Engineering II, M.E. 303	0	0	3
Electives	6	6	3
	18	21	18

CONSTRUCTION OPTION

Fluid Mechanics, E.M. 330	0	0	3
Sanitary and Mechanical Equipment of Buildings, C.E. 365	3	0	0
Materials Testing Laboratory, H.E. 332, 333	0	1	1
Construction Engineering I, C.E. 361, 362, 363	3	3	3
Electrical Equipment of Buildings, E.E. 343	0	0	3
Electives	3	3	3
	21	19	22

SANITARY OPTION

Fluid Mechanics, E.M. 330	0	3	0
Hydraulics, C.E. 443	0	0	3
General Bacteriology, Bot. 402	0	4	0
Aquatic Biology, Bot. 473	0	0	2
Sanitary Engineering, C.E. 383	0	0	3
Treatment of Water and Sewage, Chem. E. 308	3	0	0
Electives	3	3	3
	18	22	20

Senior Year

Required

COURSES	CREDITS First Term	Second Term	Third Term
Reinforced Concrete, C.E. 421, 422	3	3	0
Soil Mechanics, C.E. 435	3	0	0
Theory of Structures, C.E. 431, 432	3	3	0
Structural Design, C.E. 426, 427	0	3	3
Graphic Statics, C.E. 423	1	0	0
	10	9	3

Choice must be made of one of the following options:

GENERAL CIVIL OPTION

Railroad Economics, C.E. 442	0	3	0
Transportation, H.E. 423	0	0	3
Applied Astronomy, C.E. 453	0	0	4
Materials Testing Laboratory, H.E. 332, 333	0	1	1
Waterworks, C.E. 485	3	0	0
Sanitary Engineering Laboratory, C.E. 481, 482	1	1	0
Sewerage, C.E. 486	0	3	0
Business Law, Econ. 307	0	0	3
Electives	6	3	6
	20	20	20

HIGHWAY OPTION

Transportation, H.E. 423	0	0	3
Applied Astronomy, C.E. 453	0	0	4
Materials Testing Laboratory, H.E. 332, 333	0	1	1
Highway Engineering II, H.E. 421, 422	3	3	0
Highway Office Practice and Design, H.E. 425, 426	1	1	0
Business Law, Econ. 307	0	0	3
Electives	6	6	6
	20	20	20

CONSTRUCTION OPTION

Construction Engineering II, C.E. 461, 462, 463	3	3	3
Construction Methods, C.E. 469	0	0	3
Specifications, C.E. 467	0	0	3
Economics or Social Sciences	3	3	3
Electives	3	3	3
	19	18	18

SANITARY OPTION

Materials Testing Laboratory, H.E. 332, 333	0	1	1
Sanitary Engineering Laboratory, C.E. 481, 482	1	1	0
Waterworks, C.E. 485	3	0	0
Water Purification, C.E. 488	0	3	0
Sewerage, C.E. 486	0	3	0
Sewage Disposal, C.E. 489	0	0	3
Financing of Sanitary Utilities, C.E. 483	0	0	3
Technical Writing I, Eng. 321	0	0	3
Business Law, Econ. 307	3	0	0
Electives	3	3	6
	20	20	19

All seniors are required to make the official engineering inspection trip.

DEPARTMENT OF ELECTRICAL ENGINEERING

Professor William Hand Browne, Jr., Head of the Department
Professors J. E. Lear, R. S. Fouraker; Associate Professors R. R. Brown, L. M. Keever; Assistant Professors R. J. Pearsall, K. B. Glenn, E. W. Winkler, J. H. Nichols; Teaching Fellow J. F. Mynes.

Buildings and Equipment.—The Department is housed in Daniels Hall. This is an L-shaped building, the main part of which is four stories of brick, stone and steel construction, with a two-story wing of shop construction, the sides of which are almost entirely of glass.

Laboratories.—The laboratories can be classified as follows: Dynamo, Communications and Transmission; Photometric, Measurements, Standards, High-Tension, and Electronics. The Dynamo, High-Tension, and Electronics Laboratories are located in the wing; all the others are in the basement of Daniels Hall.

The Dynamo Laboratory is sixty by eighty feet in area. Here the characteristics and operating conditions of representative types of machines are studied. This laboratory has a total of approximately 300 kva of motors and generators (about 50 in all). There are about 150 kilowatts available in motor-generator sets, and rotary converters.

There are also available approximately 150 kva of transformers for tests.

The laboratory is well supplied with accessory equipment, such as load units, field rheostats, starting boxes, prony brakes, inductances, capacitors, and other devices.

The Communications and Transmission Laboratory is equipped for measurements and tests on communication and power-transmission circuits. It contains an outstanding artificial power-transmission line on which power-transmission line characteristics can be duplicated for study and testing. A complete long-line telephone system, with two two-way repeaters and associated apparatus, arranged for all usual and several special tests, is another feature of this laboratory. Other equipment for study and test includes an artificial line for the study of corona effects, artificial telephone lines, telephone central-station equipment, telegraph equipment, teletypewriter equipment, and a complete 100-line private automatic exchange with its associated appliances. Test equipment includes standard oscillators, transmission-measuring sets, noise-measuring sets, power-level instruments, audibility meters, attenuators, and apparatus for measuring distortion.

The Photometric Laboratory is housed in a room especially fitted up for the purpose. The equipment includes photometric standard lamps, two 300-cm. Leeds & Northrup photometer bars, a 36" Ulbrecht spherical photometer, two Macbeth-Evans Illuminometers, several Weston foot-candle meters, and other portable photometers. There is also the usual

list of accessories, such as sight boxes of the Lummer-Brodhun and flicker types, rotating disks, and screens.

The Measurements Laboratory is arranged for making standard and special tests and measurements on the fundamental electrical units. The apparatus includes standards of resistance, inductance and capacitance, with special bridges for the measurement of each, Fahy permeameter and Epstein core-loss test sets for magnetic measurements on iron and steel, a special double bridge and oil-bath arrangement for conductivity measurements, and other special test appliances.

The Standards Laboratory is arranged for making accurate calibration tests on all types of electrical instruments. There are two specially designed test tables equipped with convenient means of controlling current and voltage. A large number of high-quality instruments of all types is provided. These include standard cells, a Leeds-Northrup Type-K and a Queen-Gray Potentiometer, standard voltmeters, ammeters, wattmeters, watt-hour meters, transformers, resistances, condensers and inductances. Certificates of accuracy from the National Bureau of Standards in Washington, D. C., have been obtained for many of these instruments. Special equipment used includes a sine-wave generator, a constant-speed frequency set, Silsbee current- and potential-transformer test sets, and others.

The High-Tension Laboratory has a 7½-kva, 50,000-volt, and a 10-kva, 100,000-volt transformer. The induction regulators which go with these transformers make it possible to vary the voltage from zero to 150,000 volts. There is also standard oil-testing equipment for testing transformer oil, a standard spark gap, and numerous insulators of various types for carrying on routine tests. Frequent use is made of the cathode-ray oscillograph in studying surges and other disturbances.

The Electronics Laboratory. The Electronics Laboratory is arranged for testing electronic devices and their associated equipment and circuits. It is supplied with the various types of electron tubes, including vacuum tubes, gaseous tubes, phototubes, mercury-vapor tubes, cathode-ray tubes, and apparatus for operating and testing them. The test equipment includes vacuum-tube bridge and test sets, oscilloscopes, and the various sensitive instruments required for electronic measurements. Television equipment is being provided through a recent gift to the Department.

Instrument Room and Shop.—A centrally located Instrument Room serves all of the laboratories. Instruments are issued upon requisition and returned at the end of the laboratory period. They are kept in repair by a competent man, who divides his time between the care of the instruments and the Departmental Shop, which adjoins the Instrument Room. The Shop is fitted up with sufficient tools for making all minor repairs to laboratory equipment, as well as apparatus for special research.

The Storage-Battery Room contains two 120-volt, 100-ampere-hour batteries; two 12-volt, 200-ampere-hour batteries, the complete battery and

counter emf cells for operating the automatic telephone station, and portable cells of various types. Motor-generator sets, and mercury-vapor and tungar rectifiers are provided for charging the batteries.

The Purposes of the Curriculum are the training of young men for active work in a wide and diversified field. 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, since 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 in the fundamentals of communication, the other in the field of industrial applications.

The curriculum includes a thorough drill in the preparation of technical reports. There is a decided trend in industry to select for high administrative positions men who have had good technical training and have in addition developed executive ability. The electives included in the curriculum in Electrical Engineering enable a student inclined toward executive work to take nonprofessional courses which deal with the economic and sociological problems of the day. On the other hand, those students who prefer the more technical phases of engineering can select electives specially helpful in that particular branch of the profession into which they wish to go. Students are urged to plan as early as possible a worth while group of elective courses so chosen as to round out their curriculum.

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 effected 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

For the Freshman Year, refer to page 104.

Surveying, C.E. s200, 3 credits, is required in the summer immediately following the freshman year.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics for Engineers, Phys. 201, 202, 203	4	4	4
*Business English, Public Speaking, Eng. 211, 231 and one term English or American Literature	3	3	3
General Economics, Econ. 201, 202, 203	3	3	3
Forge and Welding Practice, M.E. 128	0	0	3
†Electrical Engineering Fundamentals, E.E. 201, 202	3	3	0
‡Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	20	20	20

Junior Year

Engineering Mechanics, E.M. 311, 312, 313	3	3	3
Elementary Mechanism, M.E. 215, 216, 217	1	1	1
Engineering Thermodynamics, M.E. 307, 308, 309	3	3	3
Mechanical Engineering Laboratory II, M.E. 313, 314, 315	1	1	1
Technical Writing, Eng. 321	0	3	0
Differential Equations, Math. 401a	3	0	0
Elementary Modern Physics, Phys. 407	0	0	3
Electrical Engineering, E.E. 301, 302, 303	4	4	4
Electrical Engineering Laboratory, E.E. 311, 312, 313	2	2	2
Electives	3	3	3
	20	20	20

Summer requirement: Six weeks industrial employment.

Senior Year

Business Law, Econ. 307	0	0	3
Accounting for Engineers, Econ. 212	0	3	0
Engineering Economics, I.E. 301	3	0	0
Strength of Materials, E.M. 321	3	0	0
Electrical Industry, I.E. 402	0	3	0
Fluid Mechanics, E.M. 330, 331	3	3	0
Illumination, E.E. 437	0	0	3
Electric Transmission, E.E. 403	0	0	4
Electric Distribution, E.E. 433	0	0	3
Alternating Current Machinery, E.E. 401, 402	4	4	0
Electrical Engineering Laboratory, E.E. 411, 412, 413	2	2	2
First Option			
Electric Communication, E.E. 425, 426, 427	3	3	3
Second Option			
Electric Power Application, E.E. 421, 422, 423	3	3	3
Electives	3	3	3
	21	21	21

All seniors are 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 my substitute for the courses listed a Modern Language.

† Sophomore class is divided into two sections, one half taking Fundamentals and Metal Work as scheduled, the other half taking the Metal Shop during the 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 and Political Science, Modern Languages, Sociology.

GENERAL ENGINEERING

The Curriculum in Engineering Leading to the Degree, Bachelor of Science in Engineering

Professor G. Wallace Smith, Administrative Officer

We live in a world of applied science; for that reason, the cultured gentleman of the twentieth century must know something of Engineering. Otherwise, he is not well informed.

Engineering is not only a means of earning a livelihood; it is also a culture, a manner of thinking and living. It is founded upon the pure sciences of Mathematics, Physics, and Chemistry. It deals largely with Materials, Methods, Men, and Money. There appears to be an increasing demand for a curriculum which will offer to young men the opportunity to study Engineering as a field of culture, with no specific purpose of specialization but solely with the idea of obtaining a well-balanced, thoroughly rigorous training and discipline in the basic principles of Engineering. Largely for this reason this curriculum is here offered. It is not easy; it omits no essential foundation stone in the present recognized Engineering curricula. The freshman year is identical with that of all other Engineering curricula. The sophomore, junior, and senior years differ from the specialized curricula only in that specialized technical courses are omitted and to some extent replaced by electives which must be taken more largely in the social sciences.

The advantages of this curriculum are several:

The student acquires a better, broader training in the basic principles of all Engineering curricula.

He has more electives and more freedom in the choice of these electives than in the specialized curricula.

The total length of the curriculum is nine term credits shorter than any of the specialized curricula. This permits a student more time for extra-curricula activities which are an essential part of the lives of all college students, yet because of the heavily loaded condition of the specialized curricula are frequently crowded out for all but the very best and most energetic students. This curriculum leads to the degree of Bachelor of Science.

CURRICULUM IN GENERAL ENGINEERING

For the Freshman Year, refer to page 104.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
Physics, Phys. 201, 202, 203	5	5	5
English or Modern Language[1]	3	3	3
Military Science II, Mil. 201, 202, 203, or Elective	2	2	2
Sports Activities, P.E. 201, 202, 203	1	1	1
Electives[2]	4	4	4
	19	19	19
Summer School Surveying, C.E. 102s	3		

Junior Year[3]

Engr. Mechanics, E.M. 311, 312, 313	3	3	6
Strength of Materials, E.M. 321	0	0	3
Engr. Geology, Geol. 220	3	0	0
Thermodynamics and Lab., M.E. 307, 308, 309	3	3	3
and M.E. 313, 314, 315	1	1	1
Economics, Econ. 201, 202, 203, or other Social Science	3	3	3
Business Law, Econ. 307	0	3	0
Electives[2]	6	6	6
	19	19	19

Senior Year

Elements of Elect. Eng. II, E.E. 331, 332, 333	4	4	4
Elements of Structures, C.E. 438, 439	0	3	3
Fluid Mechanics, E.M. 330	3	0	0
Strength of Materials, E.M. 322	3	0	0
Chem. of Eng. Materials, Chem. E. 212, 213	0	3	3
Accounting I, Econ. 301, 302, 303	3	3	3
Electives[2]	6	6	6
	19	19	19

[1] Students who do not make an average of B or better in Freshman English will be required to continue English in the Sophomore year.

[2] Free electives, except that not more than 15 term credits may be chosen from the technical or special technical courses in the School of Engineering.

[3] Students who contemplate the addition of a fifth year in Engineering for the purpose of obtaining a professional degree will consult the head of the department in which he intends to major and make such substitutions for the Engineering courses offered in this curriculum as are necessary for the satisfactory completion of the technical requirements of the degree sought.

GEOLOGICAL ENGINEERING

Professor Jasper L. Stuckey, Head of the Department
Assistant Professor John M. Parker; Instructor J. F. West;
Teaching Fellow K. H. Teague

Function and Facilities. The function of the Department of Geology is twofold: first, to offer service courses required as prerequisites in the Agricultural, Educational, and Engineering curricula; second, to administer the curriculum in Geological Engineering.

The classrooms, laboratories, and offices of the Department are in Primrose Hall. The equipment includes a varied collection of minerals, rocks, and fossils, illustrating the materials of different parts of the earth's crust; laboratory equipment for carrying on qualitative chemical and blowpipe examination of minerals and rocks; microscopes and other optical equipment; facilities for making thin sections of rocks and minerals; geological models; a collection of topographic maps and geologic folios illustrating important and typical areas in the United States.

The Curriculum is designed to train young men in the fundamentals of engineering with its special application of geology. Many engineering undertakings, especially major construction projects, such as large dams and reservoirs, tunnels, large buildings, depend for success on exact knowledge of their geological setting. On the other hand, such geological problems as the economical development of mineral resources require the use of the precise methods of engineering. The curriculum combines these two sorts of information and training so necessary to success in this important specialized field.

Professional Outlook. Well trained geological engineers are in demand by mining and oil companies, by State and Federal Geological Surveys, in the larger industries using mineral raw materials, by leading railways, by hydro-power concerns, and by technical schools as teachers of geology. Openings in this field have increased because of the recent recognition that the geological aspects of engineering and industry have been neglected. Consequently, men with the specialized training required have been difficult to find.

The mineral resources of the State offer important possibilities for large future developments. In Western North Carolina there exist valuable deposits of copper, nickel, iron, feldspar, mica, kaolin, cyanite, barite, granite, limestone, and other minerals; in Central North Carolina are coal deposits of promising quantity and quality, and large areas of pyrophyllite, of granite and other building stone; on the Coastal Plain are deposits of phosphate and marls. The production and use of these materials will undoubtedly be expanded as their availability becomes better known. Their profitable development will require increasing skill in geology and engineering, not merely in the extraction of the ore, but more especially in controlling the direction of the work.

New discoveries are sure to be made in such a richly mineralized area but no longer by chance or superficial hunting. The day of the old-time, untrained prospector is gone; every resource of science must now be utilized in this increasingly difficult search. The successful prospector of the future must understand the physical and chemical processes and conditions responsible for each kind of mineral deposit, as well as the secondary alterations they may undergo. He must be capable of using the complex and sensitive instruments devised for investigating the earth's crust far below the surface.

In these related fields of major engineering projects and the economical extraction of the mineral raw materials of industry, men well trained in the fundamentals of the physical sciences and in engineering technology will occupy key positions. In a civilization such as ours, this must be an increasingly large field.

CURRICULUM IN GEOLOGICAL ENGINEERING

For the Freshman Year, refer to page 104.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
*Business English, Public Speaking and English or American Literature, Eng. 211, 231, or any one of 261-267	3	3	3
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212	0	4	0
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Engineering Geology, Geol. 220	3	0	0
Historical Geology, Geol. 222	0	3	0
Mineralogy, Geol. 230	0	0	3
Geomorphology, Geol. 223	0	0	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	21	20

Junior Year

Engineering Mechanics, E.M. 301, 302	3	3	0
Fluid Mechanics, E.M. 330	0	0	3
Strength of Materials, E.M. 320	0	0	3
Heat Engineering II, M.E. 303	0	0	3
Elements of Electrical Engineering I, E.E. 321, 322	3	3	0
Physical Chemistry, Chem. 331	5	0	0
Theoretical Surveying, C.E. 221, 222	3	3	0
Field Surveying, C.E. 225	1	0	0
Mapping, C.E. 226	0	1	0
Straitigraphy and Index Fossils, Geol. 361	3	0	0
Petrology, Geol. 443	0	0	4
Advanced Mineralogy, Geol. 332	0	3	0
Structural Geology, Geol. 352	0	4	0
Geophysics, Geol. 353	0	0	4
Electives	3	3	3
	21	20	20

* Students who have been certified by the Department of English as proficient in English may substitute Modern Language for the courses listed.

† Or 6 credits in one or two of the following departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

Senior Year

COURSES	CREDITS First Term	Second Term	Third Term
General Economics, Econ. 201, 202, 203	3	3	3
Business Law, Econ. 307	0	3	0
Optical Mineralogy, Geol. 431, 432, 433	3	3	3
Soil Mechanics, C.E. 435	3	0	0
Technical Writing I, Eng. 321	3	0	0
Economic Geology, Geol. 411, 412, 413	3	3	3
Advanced Engineering Geology, Geol. 462	0	3	0
Field Methods, Geol. 463	0	0	4
Mining Engineering, Mine Design, and Ore Dressing, Geol. 471, 472, 473	3	3	3
Electives	3	3	3
	21	21	19

All seniors are required to go on the inspection trip as part of their curriculum.

INDUSTRIAL ENGINEERING

Professor H. B. Shaw, Head of the Department
*Professor F. F. Groseclose; Instructor David E. Henderson

North Carolina has an abundance of natural resources, and its industries are progressing steadily, which facts mean that there are increasing needs for educated personnel and informed leaders to deal with the complexities of modern industries.

Engineers have had a surprisingly large share in America's amazing industrial progress through their engineering knowledge and the adaptation of engineering methods and approach to the solution of industrial problems. To be even more effective in industry and modern life, engineers should, to their study of engineering, add knowledge of the economic and social sciences since they must deal, not only with the materials and forces of nature, but also with men, money, and affairs, in their industrial relations.

The aim of the curriculum in Industrial Engineering is to prepare students to enter the employ of industries as engineering graduates, then through experience, to develop into positions of responsibility and service, and thus to meet the demands of industries for men educated as engineers with special preparation for the activities of industries.

The curriculum provides thorough education in the fundamentals of engineering, with a three term course in each Mechanical and Electrical Engineering. Accounting, Economics, and Psychology are emphasized. The special technical courses apply engineering methods in the studies of industry, to the end that students may learn to make engineering, economic, and social analyses concurrently, and to apply them to the conduct of enterprises.

Electives from engineering and other courses, approved by the adviser, offer opportunity for the development of individual aptitudes. Students in Industrial Engineering get class and laboratory instruction from other

* On leave.

Engineering Departments and from other courses, which are correlated and extended by the Industrial Engineering courses.

The classrooms and offices of Industrial Engineering are in rooms 125 to 132, on the first floor of 1911 Building.

Attention is directed to the course in Motion and Time Study (I. E. 322) which is required of Industrial Engineering juniors and is elective for others.

CURRICULUM IN INDUSTRIAL ENGINEERING

For the Freshman Year, refer to page 104.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, and III, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 211, 231, and any one of courses 261 to 267	3	3	3
Physics for Engineers, Phys. 201, 202, 203	4	4	4
General Economics, Econ. 201, 202, 203	3	3	3
Shopwork, M.E. 124, 125, 126	2	2	2
Industrial Organization, I.E. 101, 102, 103	3	3	3
*Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	22	22	22

Junior Year

Engineering Mechanics, E.M. 301, 302	3	3	0
Strength of Materials, E.M. 321	0	0	3
Engineering Thermodynamics II, M.E. 307, 308, 309	3	3	3
Mechanical Engineering Laboratory II, M.E. 313, 314, 315	1	1	1
Machine Shop II, M.E. 227, 228, 229	1	1	1
Factory Equipment, M.E. 224	0	0	3
Principles Accounting, Econ. 301, 302, 303	3	3	3
Management Engineering, I.E. 201, 202, 203	3	3	3
Motion and Time Study, I.E. 322	0	3	0
Electives	6	3	3
	20	20	20

Summer requirement: Six weeks industrial employment.

Senior Year

Technical Writing I, Eng. 321	0	3	0
Business Law, Econ. 307	3	0	0
Industrial Psychology, Psychol. 338	0	0	3
Materials of Construction, C.E. 321	3	0	0
Elements of Electrical Engineering II, E.E. 331, 332, 333	4	4	4
Engineering Economics, I.E. 301	3	0	0
Electrical Industry, I.E. 402	0	3	0
Industrial Engineering Problems, I.E. 312, 313	0	3	3
Investigation and Report, I.E. 433	0	0	3
Electives	6	6	6
	19	19	19

All seniors are 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 Modern Language for the courses listed.

† Or 6 credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology, Ethics and Religion.

MECHANICAL ENGINEERING

Professor L. L. Vaughan, Head of the Department
Professors H. B. Briggs, E. G. Hoefer, R. B. Rice, H. E. Satterfield, F. B. Wheeler; Associate Professor W. S. Bridges; Assistant Professors W. E. Adams, T. C. Brown, R. L. Cope, M. R. Rowland; Instructors F. C. Bragg, J. C. Cheatham, T. E. Hyde, R. E. Lake, P. B. Leonard, C. W. Maddison, W. M. Neale, E. H. Stinson;
Instructor Emeritus C. B. Park.

Purposes.—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 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; by the tests performed in the mechanical laboratories.

Through the training offered in this curriculum it is hoped that the young graduate, after gaining some experience in industry, will be qualified to accept the responsibilities which will be imposed upon him in the professional field of Mechanical Engineering.

Buildings and Equipment.—The Department of Mechanical Engineering occupies both Page Hall and the Shops Building. In Page Hall are the office of the Head of the Department, offices for the drawing division and the laboratory division, classrooms, drafting rooms, the Internal Combustion-Engine Laboratory, and Hydraulics Laboratory. The Shops Building contains the Mechanical Engineering Laboratory, the Heating and Air-Conditioning Laboratory, the Wood Shop, the Foundry, the Welding Shop, and the Machine Shop. It also contains the offices of the instructors in the several Shops and one classroom.

Drafting Rooms. The drafting rooms are equipped with tables, stools, cases for boards, reference files, and models. The drafting rooms have two University Drafting Machines in addition to other necessary equipment. The blueprint room contains an electric blueprint machine, a sheet washer, and an ozalid printing machine, besides the usual sun frames.

Shops.—The Wood Shop is equipped with a variety of modern machines: lathes, combination saw, dado saw, cut off saw, jointer, mortisers, sanders, moulder, sticker, trimmer, shaper, boring machines, band saws, jig saw, various types of clamps, a glue room, and other essentials that go to make an up-to-date shop. The machines are motor driven with either individual or group drive. The shop includes work benches, hand tools and necessary auxiliary equipment and a modern spray-gun for finishing surfaces.

The Foundry Equipment consists of a 36" cupola, a 14" cupola, brass furnace, core oven, core machine, moulding machines, cleaning mill, motor-driven elevator, emery wheel and buffer, and the necessary tools and patterns for practical moulding. Complete sand-testing equipment has been recently added.

The Forge Shop is equipped with thirty 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 efficient lighting of the shop. Other equipment consists of drill press, iron shears, vises, emery wheel, and other necessary forging equipment. Recent additions include a 300-ampere direct-current electric welder and a ten-station oxy-acetylene welding-manifold system. Both low- and medium-pressure types of torches are included in the installation.

The Machine Shop, well heated, lighted, and ventilated, is equipped with work benches, machinist's vises, and a variety of machine tools; engine lathes, bench lathes, shapers, planers, milling machines, vertical and horizontal boring mills, drill presses, slotting machines, grinders, arbor presses, and a variety of hand tools, cutters, clamps, jigs, and other equipment necessary to modern machine shop practice. Some of the machines are group driven, others are individually driven.

Laboratories. The Heat Power, Heating and Air-Conditioning, and Metallurgical Laboratories are located in the Shops Building. The Heat-Power Laboratory is equipped with plain slide-valve, automatic cut-off, multiple-expansion, and uniflow engines arranged for condensing and noncondensing operation. It is provided with a turbo-generator set complete with a high-vacuum condenser. A two-stage air compressor driven by a uniflow engine supplies air for experimentation. Weighing tanks and steam pumps make possible tests in this field. This division of the laboratory is equipped with instruments and apparatus for making coal and gas analyses and tests, lubrication tests, calibration tests, heat-transfer tests, nozzle tests, and general efficiency and thermodynamic tests.

The Heating and Air-Conditioning division of the laboratory contains several heating boilers with appropriate oil-burning equipment, weighing

tanks and instruments for complete tests. The laboratory is also equipped with an air conditioner, unit heaters, radiator-testing equipment, a half-ton refrigeration machine, insulation-testing equipment and a fan-and-duct testing unit.

The Metallurgical Laboratory is equipped for work dealing with the structure and the physical and mechanical properties of metals and alloys. The equipment includes electric and gas heat-treating furnaces with controls; indicating and recording pyrometers; apparatus for polishing and etching specimens; metallurgical microscopes with complete lens combinations; dark rooms for photographic and photoelastic equipment. The laboratory is equipped with 15,000 lb. and 50,000-lb. material-testing machines.

The Hydraulic-Machinery, and Internal-Combustion-Engine Laboratories are housed in the basement of Page Hall. The Laboratories are equipped with a new twenty-inch wind tunnel capable of speeds in excess of 100 miles per hour. The tunnel is equipped with automatic balances. A smokebox is provided for flow-analysis work. Photographic equipment is provided for flow study.

The Hydraulic Testing Laboratory contains a ten-inch Francis-Type Hydraulic Turbine, of the most modern design, directly connected to an electric dynamometer, together with weir, Venturi, flume, and instruments for complete test. The laboratory has high-speed and low-speed centrifugal pumps arranged for tests, also Venturi tubes, weirs, nozzles, meters, and a hydraulic channel for the study of flow.

The Internal-Combustion-Engine Laboratory is equipped with a high-speed and low-speed compression-ignition engines, automotive and stationary spark-ignition engines, air-cooled and liquid cooled aircraft engines, all of modern design. Each of the test engines, of which there are ten at present, is equipped with its power-absorbing device, such as club-propellers in the case of areo engines and water brakes, calibrated electric generators and electric cradle-dynamometers for the other engines. A 5-hp. electric dynamometer is provided for accessory testing and a 125-hp. dynamometer for high-speed-engine testing. Engines, carburetors, ignition equipment and accessories are provided for study. A C.F.R.-A.S.T.M. unit is available for fuel research.

All of the laboratories are designed around the unit system for instruction, whereby units in or whole divisions of the laboratory may be operated without depending on or interfering with other units or divisions.

CURRICULUM IN MECHANICAL ENGINEERING

For the Freshman Year, refer to page 104.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Calculus I, II, III, Math. 201, 202, 303	4	4	4
*Business English, Public Speaking, Eng. 211, 231 and one term English or American Literature	3	3	3
Physics for Engineers, Phys. 201, 202, 203	4	4	4
Mechanical Drawing, M.E. 211, 212, 213	2	2	2
Shopwork, M.E. 124, 125, 126	2	2	2
Engineering Mechanics, E.M. 311, 312	0	3	3
†Military Science, Mil. 201, 202, 203	2	2	2
Physical Education, P.E. 201, 202, 203	1	1	1
	18	21	21

Junior Year

Engineering Mechanics, E.M. 313	3	0	0
Machine Shop II, M.E. 227, 228, 229	1	1	1
Engineering Thermodynamics, M.E. 307, 308, 309	3	3	3
Mech. Eng. Lab. II, M.E. 313, 314, 315	1	1	1
‡Kinematics, M.E. 317, 318, 319	3	3	3
Materials of Construction, C.E. 321	0	3	0
Metallurgy, M.E. 222, 223	0	3	3
Strength of Materials, E.M. 321, 322	0	3	3
Fluid Mechanics, E.M. 330	0	0	3
Business Law, Econ. 307	3	0	0
Technical Writing, Eng. 321	3	0	0
**Electives	3	3	3
	20	20	20

Summer requirement: Six weeks of industrial employment, or ten hours solo flying.

MECHANICAL ENGINEERING I—GENERAL OPTION

Professor L. L. Vaughan, Faculty Adviser

Senior Year

General Economics, Econ. 201, 202, 203	3	3	3
Power Plants, M.E. 401, 402, 403	3	3	3
Heating and Air Conditioning, M.E. 404	0	3	0
Machine Design, M.E. 411, 412, 413	3	3	3
Refrigeration, M.E. 405	0	0	3
Mechanical Engineering Lab. III, M.E. 407, 408, 409	1	1	1
Elements of Electrical Engineering II, E.E. 331, 332, 333	4	4	4
Hydraulic Machinery, E.M. 331	3	0	0
**Electives	3	3	3
	20	20	20

All seniors are 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 Modern Language for the courses listed.

† Or 6 credits in one or two of the following Departments: Economics, Psychology, History, Modern Language, Sociology.

‡ Furniture Option, M.E. 341, 342, 343.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

MECHANICAL ENGINEERING II FURNITURE OPTION

Assistant Professor M. R. Rowland, Faculty Adviser

In view of the fact that North Carolina at present ranks second in furniture manufactured in the United States, a curriculum is offered in furniture production and manufacture. Within a radius of sixty miles of the city of High Point, North Carolina, there is situated over a hundred furniture factories. As a result there is a demand for graduates trained in this field of endeavor in this State as well as in other States.

The purpose of this course is to train young men, who are interested in wood industries and want a practical and scientific insight into the art of designing and production of furniture, to enter the field of actual production of modern furniture and to lay a foundation for future work as managers, or executives in the wood products industries.

The equipment of the entire Mechanical Engineering Department is available for instruction. A comprehensive file of useful data on woods, material on period design, and trade literature are also available.

The fundamental courses in the Mechanical Engineering curriculum are required in this option, with particular emphasis placed on modern manufacturing methods, management of operation, costs of production, maintenance of plant, and practical design of wood products. A thorough drill in the preparation of technical drawings and reports is required. Each student will make one or more field trips to inspect typical wood industries and submit a report of his observations.

Each student will be required to spend at least six weeks in industrial employment before receiving his degree. This aids him in securing and satisfactorily holding a position upon graduation.

Freshman, Sophomore and Junior years identical with the General Mechanical Engineering Curriculum.

Summer requirement: Six weeks of industrial employment.

Senior Year

COURSES	CREDITS First Term	Second Term	Third Term
General Economics, Econ. 201, 202, 203	3	3	3
Power Plants, M.E. 401, 402, 403	3	3	3
Mech. Eng. Lab. III, M.E. 407, 408, 409	1	1	1
Furniture Construction, M.E. 445, 446, 447	3	3	4
Lumbering, For. 422	0	3	0
Lumber Seasoning, For. 423	0	0	2
Engineering Economics, I.E. 301	3	0	0
Elements of Electrical Engineering II, E.E. 331, 332, 333	4	4	4
**Electives	3	3	3
	20	20	20

All seniors are required to go on the inspection trip as part of their curriculum.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

MECHANICAL ENGINEERING III—HEATING AND AIR-CONDITIONING OPTION

Professor R. B. Rice, Faculty Adviser

The Mechanical Engineering Department offers this option because of the increasing interest in heating and air conditioning for comfort; and furthermore because the engineering profession is largely responsible for the health and well-being of society through the effective construction and operation of heating and air-conditioning systems. Emphasis is placed on this phase of engineering through the application of fundamental principles to design, laboratory investigations and research. Through this means the student is given an opportunity to become familiar with standard practice in this field.

Freshman, Sophomore and Junior years identical with the General Mechanical Engineering Curriculum.

Summer requirement: Six weeks of industrial employment.

Senior Year

COURSES	CREDITS First Term	Second Term	Third Term
General Economics, Econ. 201, 202, 203	3	3	3
Power Plants, M.E. 401, 402, 403	3	3	3
Heating and Air Conditioning Lab., M.E. 455, 456, 457	1	1	1
Hydraulics Machinery, E.M. 331	3	0	0
Heating and Air Conditioning II, M.E. 451, 452, 453	3	3	3
Heating and Air Conditioning Design, M.E. 458, 459	0	3	3
Elements of Elec. Engr. II, E.E. 331, 332, 333	4	4	4
**Electives	3	3	3
	20	20	20

All seniors are required to go on the inspection trip as part of their curriculum.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

DIVISION OF TEACHER EDUCATION

Professors:

T. E. Browne, M.A., Director of the Division
Leon E. Cook, M.S.. Agricultural Education
Edward W. Boshart, M.A., Industrial Arts Education, and Guidance
J. K. Coggin, M.S., Agricultural Education

Associate Professors:

L. O. Armstrong, M.S., Agricultural Education
J. Warren Smith, M.S., Industrial Education
J. R. Ludington, Ph.D., Industrial Arts Education
William McGehee, Ph.D., Psychology

Instructor:

D. J. Moffie, Ph.D., Psychology

Purposes.—The Division of Teacher Education at State College, operating as a local Division of the Division of Teacher Education of the Greater University of North Carolina, has imposed upon it the responsibility of training teachers of Agriculture, of Trades and Industries, and of Industrial Arts. As further emphasizing the importance of the work, the State Board for Vocational Education has designated State College for training men as teachers of these subjects in white schools, and as counselors to students in choosing their vocations. Following this action, Federal appropriations to the State under the Smith-Hughes and the George-Deen Acts of Congress for such teacher training are allotted to the College.

Organization. The Division offers curricula for preparing teachers of Agriculture, of Industrial Arts, of Industrial Education, and of Occupational Information and Guidance. The training includes four definite objectives. The first embraces the fundamentals of general education: English, Mathematics, the natural sciences — Biology, Chemistry, Physics — Economics, Sociology, and History. These subjects are given in the Basic Division of the College. Next are the technical subjects selected according to the professional course of the student: for Agricultural Teaching, in the School of Agriculture; for Industrial Arts and Industrial Education, in the School of Engineering. In the third group are the principles and methods of teaching and of vocational guidance. Educational Psychology here is obviously essential. The last objective is practical experience. To meet the requirements of the State Department of Public Instruction for teaching certificates, students, before graduation, observe and teach under the direction of the faculty of the Division in selected high schools. Moreover, experience in the respective occupations is required for those preparing to teach agriculture, and the trades and industries.

Psychology.—General Psychology, giving an understanding of man's reactions to individual and social forces, constitutes one of the fundamentals

of liberal education. Educational Psychology, applying the general principles to the problems of instruction, learning, and character building, becomes obviously essential in the equipment of teachers. Courses in Applied, Industrial, and Social Psychology of specialized nature meet the needs of the various technological curricula. The Department of Psychology, in view of its intimate relation to the problems of teacher education, is incorporated administratively in the Division of Teacher Education; at the same time it functions instructionally throughout the Basic Division and the Professional Schools.

Requirements for Graduation.—For graduation in the Division of Teacher Education, the scholastic requirement in all curricula is the satisfactory attainment of at least 230 term credits with not fewer than an equal number of honor points.

Of the term credits required for graduation, a student must have at least 27 in Education, 18 in Language, 18 in the Natural Sciences, 18 in Social Science, 12 in Military Training or alternatives, 6 in Physical Education. Subjects must be taken as indicated in the several curricula.

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

Further requirements consist of practice teaching in the subject and practical experience in the work to be taught as indicated above or under the several Departments.

Degrees.—Upon the satisfactory completion of one of the curricula in Education, a student is awarded the degree of Bachelor of Science with the name of his special curriculum appended: in Agricultural Education, in Industrial Arts Education, in Industrial Education.

The Graduate Division of State College offers the Master's Degree to mature students of superior ability upon successful completion of its requirements. For the details, see the statement of the Graduate Division in this Catalog.

Agricultural Education

Leon E. Cook

Object.—Agricultural Education is designed to prepare students for positions as teachers of vocational agriculture in the high schools of the State, and to qualify as such under the provisions of the Smith-Hughes and the George-Deen Acts of Congress.

The curriculum is comprehensive in nature. It is, of course, essential that teachers have a good foundation in English and in the sciences basic to an understanding of agriculture. They should also have a sufficient understanding of the social sciences to appreciate the development of contemporary life, with the emphasis on those having to do with agriculture and

the rural community. Manifestly they should have a grasp of agriculture in all phases of importance in the State, including the improvement of the farm home and of the social as well as of the economic development of the rural community. Proficiency in teaching vocational agriculture depends upon comprehensive and thorough preparation in the professional field with emphasis on personal relations and guidance, procedure in teaching both youth and adults, and in handling the various responsibilities of community service.

An adequate background of farm experience is essential for students looking forward to agricultural teaching, and experience in fields related to farming is desirable. A student should be farm-reared or should have several years of farm experience as a part of his preparation for teaching vocational agriculture.

Placement of Graduates.—There has been a strong demand for teachers of vocational agriculture with little difficulty in placing students who are qualified from the standpoint of personality, character, training, and farm experience. A coöperative arrangement with the supervisory staff in agricultural education of the State Department of Public Instruction facilitates the placement of students in situations adapted to their experience and training.

Successful teachers of agriculture are in demand for higher positions in the educational service and by other agencies for positions offering higher salaries than those paid in the teaching profession.

Graduate Study.—The Department provides opportunities for students, fully qualified, to do graduate work in Agricultural Education. Graduate students taking majors in this field should have completed the undergraduate work in Agricultural Education or the equivalent. Transfer students, or graduates in general agriculture who did not take the work in education, are required to complete 15 credits in education including Principles of Teaching and Methods of Teaching Agriculture, as prerequisites to graduate study.

CURRICULUM FOR TEACHERS OF AGRICULTURE

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Composition, Eng. 101, 102, 103	3	3	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
General Botany, Bot. 102	0	4	0
General Zoology, Zool. 101	4	0	0
Algebra and Trigonometry, Math. 111, 112	0	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Physical Geology, Geol. 120	0	0	4
‡Military Science I, Mil. 101, 102, 103	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	17	21	21

‡ Or six credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Farm Equipment, Agr. Eng. 202	0	3	0
Soils, Soils 201	0	0	4
General Economics, Econ. 201, 202	3	3	0
Agricultural Economics, Agr. Econ. 202	0	0	3
Physics for Agr. Students, Phys. 115	5	0	0
Animal Physiology, Zool. 202, or Plant Physiology, Bot. 221	0	0	5
Economic Zoology, Zool. 102	0	4	0
General Botany, Bot. 101	4	0	0
Introduction to Organic Chemistry, Chem. 221	0	4	0
Animal Nutrition I, A.H. 202	0	3	0
General Poultry, Poul. 201	3	0	0
Principles of Forestry, For. 111	3	0	0
General Horticulture, Hort. 203	0	0	3
General Field Crops, F.C. 202	0	0	3
‡Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	20	21

Junior Year

English, elective	3	0	3
Educational Psychology, Ed. 303, 304	3	3	0
Visual Aids, Ed. 308	0	0	3
Teaching Farm Shop Work, Agr. Eng. 331, 332	3	3	0
Farm Management, Agr. Econ. 303	0	0	3
Farm Accounting, Agr. Econ. 313	0	0	3
Soil Fertility, Soils 221	3	0	0
Fertilizers, Soils 302	0	3	0
Rural Sociology, Rural Soc. 302	0	3	0
*Diseases of Field Crops, Bot. 301	3	0	0
Economic Entomology, Zool. 213	0	0	4
**Electives	6	8	3
	21	20	19

Senior Year

English, elective	0	0	3
Materials and Methods in Teaching Agriculture, Ed. 412	0	5	0
Secondary Education in Agriculture, Ed. 426	0	0	3
Principles of Teaching, Ed. 406	3	0	0
Observation and Directed Teaching, Ed. 408	0	5	0
Methods of Teaching Agriculture, Ed. 407	5	0	0
Evening Classes and Directed Teaching, Ed. 411	0	5	0
***Animal Hygiene and Sanitation, A.H. 353	0	0	3
Agricultural Marketing, Agr. Econ. 411	3	0	0
**Electives	4	3	7
	15	18	16

* Diseases of Fruits and Vegetable Crops, Bot. 303, may be substituted for Bot. 301.

** Options and electives except Mil. Science III and IV must be chosen with the approval of the adviser.

*** Common Diseases, A.H. 352, may be substituted for A.H. 353.

‡ Or six credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology, and Ethics and Religion.

INDUSTRIAL ARTS EDUCATION

Edward W. Boshart, John R. Ludington

Industrial Arts comprises that area of study and experience which deals with industry as a unit of society and the manner in which industry and its related materials, processes, and problems affects and has affected other units of society. For many years North Carolina State College has had an important part in aiding individuals and groups of individuals to cope with the growing complexity of problems of living in an industrial society through its program of teacher education.

The demand for competent teachers of Industrial Arts has increased year after year and the need for Industrial Arts as an essential phase of general education at the elementary and secondary school levels is being realized by progressive school communities and leaders in education.

Purposes.—The Department of Industrial Arts is organized to aid in the education of teachers and supervisors of Industrial Arts, and to provide experiences for those individuals who desire to deal more appreciatively and effectively with problems of living in a democratic-industrial society. The successful completion of this curriculum leads to the granting of the degree of Bachelor of Science in Industrial Arts Education and the ful fillment of requirements for an A-grade certificate for teaching in this field.

The first two years of work in this curriculum are in line with the Basic Division of the College, which emphasizes work of a general and foundational nature. The junior and senior years are planned to include experiences of a specialized-professional nature.

In addition to added faculty personnel, new facilities have been provided in the Department which include: laboratories, machines, tools, benches, classrooms, and library resources. Further increases in physical setting and equipment have been planned which will make North Carolina State College one of the leading Industrial Arts teacher-education centers in the Southeast.

Graduate Program.—Opportunities are provided for students of demonstrated interest and ability to do graduate work leading to the Master's Degree. The faculty personnel and resources of the Greater University of North Carolina are used in planning a sequence of experiences on the graduate level to meet the individual interests and needs of persons interested in Industrial Arts Education. Persons interested in graduate work in this field are invited to write for detailed information and courses offered.

DIVISION OF TEACHER EDUCATION

CURRICULUM FOR TEACHERS OF INDUSTRIAL ARTS

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Composition, Eng. 101, 102, 103	3	3	3
Algebra, Trigonometry, and Mathematics of Finance Math. 111, 112, 113	4	4	4
General Chemistry, Chem. 101, 102, 103 or Optional Science	4	4	4
Industrial Arts Drawing, Ed. (I. A.) 105 a, b, c	3	3	3
Industrial Arts, Ed. (I. A.) 106 a, b, c	3	3	3
Military Science I, Mil. 101, 102, 103 or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	20	20	20

Sophomore Year

Business English, Eng. 211, Public Speaking, Eng. 231, Elective English	3	3	3
General Physics, Phys. 105, 106, 107	4	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Industrial Arts Design, Ed. (I. A.) 205	0	0	3
General Sociology, Soc. 202, 203	3	3	0
Laboratory Problems in Industrial Arts, Ed. 206 (I. A.) a, b, c	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sports Activities, P.E. 201, 202, 203	1	1	1
	19	19	19

Junior Year

Introduction to Psychology, Psychol. 200, Educational Psychology, Ed. 304, Psychology of Adolescence, Ed. 476	3	3	3
General Economics, Econ. 201, 202, 203	3	3	3
Problems in Secondary Education, Ed. 344, Field Work In Secondary Education, Ed. 433, Visual Aids, Ed. 308	3	3	3
Laboratory Problems in Industrial Arts, Ed. 306 (I. A.) a, b, c	3	3	3
Business Law, Econ. 307	3	0	0
**Electives	3	3	3
*Electives	3	5	3
	21	20	18

Senior Year

Methods of Teaching Industrial Ed. 422, Observation and Directed Teaching, Ed. 444	3	3	3
Labor Problems, Econ. 331, Vocational Guidance, Ed. 420	3	3	0
Occupational Studies, Ed. 424	0	0	3
Curriculum Problems in Industrial Arts, Ed. 482, Instructional Aids and Devices, Ed. 483, Laboratory Planning and Equipment Selection, Ed. 484	3	3	3
**Electives	3	3	3
*Electives in Related Technical and Shop Courses	6	6	6
	18	18	18

* Electives to be selected with aid of adviser to meet special needs of individual students.

† Or six credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology, and Ethics and Religion.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

OCCUPATIONAL INFORMATION AND GUIDANCE

Edward W. Boshart

Objective.—Guidance is becoming a more important part of the preparation for the high office of teaching. Pupils of all ages are in need of assistance in meeting all sorts of life problems, such as those of education, vocation, health, and emotional stability. Each level of school development elementary, junior high, senior high, and college—requires particular attention in which the teacher's advice is essential. In addition to the work of the classroom teacher, there is need of continued service in the form of general direction in supplying needed materials, suitable programs, general oversight of plans, and care of special cases requiring the attention of one with wide experience.

Through subject matter courses, including exploration, tests and measurements, the requirements of various trades, occupations, and professions, State College is endeavoring to prepare individuals to become teachers of occupational information and to serve as counselors of students in leading them through their choice of studies and vocational interests toward suc cessful and happy living. It is essential that counselors have an adequate background of teaching experience, as well as acquaintance with occupational problems; therefore, it is essential to the preparation of individuals for this work that they qualify to teach classes in occupations as related to the world about them, and thereby develop themselves for the position of counselors and directors of this work.

Organization.—The courses selected for this curriculum have as their objective the broadening of experience and acquaintance with the whole field of education and will lead toward the degree of Bachelor of Science in Occupational Information and Guidance. Throughout this period of prepara tion the emphasis will be on a thorough acquaintance with the work outlined, together with a selected minor in social sciences or natural sciences.

The first two years of this curriculum are in line with the general plan of the College which emphasizes work of fundamental value. The last two years are given to work of a professional and specialized nature stressing analysis of occupations and trades, guidance programs, organization and administration.

Placement of Graduates. There is a growing demand for teachers of occupational information and guidance. In a few instances the full time of one or more instructors will be taken up in giving occupational information and performing other guidance functions. In the smaller schools where the full time is not thus used, the teacher will be required to hold other classes and should be prepared in some related field.

Graduate Study.—This Department offers opportunity for those who have had experience in teaching to prepare for a position as counselor or director of guidance. This study leads toward the earning of the degree

of Master of Science in Education and may be accomplished through a year or more in residence or through the offerings of our Summer School Sessions. A prerequisite for work in the graduate field should be one or more years of teaching experience, a particular interest in the field, and a rather wide acquaintance with social and economic problems.

CURRICULUM FOR TEACHERS OF OCCUPATIONAL INFORMATION AND GUIDANCE

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Composition, Eng. 101, 102, 103	3	3	3
Algebra, Trigonometry, Mathematics of Finance, Math. 111, 112, 113	4	4	4
Science (selected with aid of adviser)	4	4	4
Economic History, Hist. 101, 102, 103	3	3	3
Occupations, Ed. 103	0	0	3
General Sociology, Soc. 202, 203	3	3	0
Military Science I, Mil. 101, 102, 103 or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	20	20	20

Sophomore Year

Business English, Eng. 211, Public Speaking Eng. 231, Elective English	3	3	3
Science (selected with aid of adviser)	4	4	4
General Economics, Econ. 201, 202, 203	3	3	3
History of United States, Hist. 201, 202, 203	3	3	3
†Military Science II, Mil. 201, 202, 203	2	2	2
Sports Activities, P.E. 201, 202, 203	1	1	1
**Electives	3	3	3
	19	19	19

Junior Year

English or Modern Language	3	3	3
Introduction to Psychology, Psychol. 200, Educational Psychology, Ed. 304, Psychology of Adolescence, Ed. 476	3	3	3
Problems in Secondary Education, Ed. 344, Field Work in Secondary Education, Ed. 433, Visual Aids, Ed. 308	3	3	3
††American Government, Pol. Sci. 200, 201, 202	3	3	3
**Electives	3	3	3
*Electives	6	5	3
	21	20	18

Senior Year

Methods of Teaching Occupations, Ed. 423	3	0	0
Observation and Directed Teaching, Ed. 444	0	3	3
Philosophy of Guidance, Ed. 420	3	0	0
Social Recreation, P.E. 401	0	0	3
Psycho-diagnostic Techniques, Psy. 470, 471, 472	3	3	3
Occupational Studies, Ed. 424	0	0	3
**Electives	3	3	3
*Electives in related courses	6	9	3
	18	18	18

* Electives to be selected with aid of adviser to meet special needs of individual student.

†† Political Science 203 may alternate with Political Science 200.

† Or six credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Languages, Sociology, and Ethics and Religion.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

Industrial Education

J. Warren Smith

Object.—In a greater degree than at any previous time, thought is now directed toward an extended program of trade-shop courses in Industrial Education for North Carolina high schools. Some of the causes of this focus of attention are: increased production for National Defense purposes, rising age for entrance to work, increasing school enrollment, and an extended school term. It is to prepare teachers for this field of service that this program is designed. A four-year course is outlined with the first two years running parallel with that of Industrial Arts, then specializing by following the outlined course during the last two years.

Positions for Graduates. The student who completes this course will be prepared to teach in the all-day schools or the part-time or the evening classes, such as are supported by State and Federal funds for vocational education. At the present time, little difficulty should be encountered by the successful candidates in attaining positions after graduation.

Journeyman Experience Required.—Candidates for degrees must have had at least two years of successful journeyman experience in the trade they wish to teach. Successful completion of this course leads to the degree of Bachelor of Science in Industrial Education. Men with journeymen experience who desire to take only professional courses, may enter as special students with the object of completing one or two years of training as outlined for the junior and senior years. For this work, no degree would be granted.

This Department is recognized as the official Training Department of Industrial Education for the State Department of Education. The head of the Department serves as itinerant teacher-trainer for part-time, day-trade, and evening classes, and for the preparation of prospective teachers.

For the time being, the services of the Head of this Department will be devoted largely to itinerant-teacher training. However, as the demand for resident courses at State College designed to prepare shop teachers develops, the schedule can be adjusted to meet this demand.

CURRICULUM FOR TEACHERS OF INDUSTRIAL EDUCATION

For freshmen and sophomore years, see Industrial Arts Education

Junior Year

COURSES	CREDITS First Term	Second Term	Third Term
Philosophy of Industrial Education, Ed. 427	0	3	0
*Shopwork (selected)	3	3	3
Introduction to Psychology, Psychol. 200, Educational Psychology, Ed. 304, Psychology of Adolescence, Ed. 476	3	3	3
Philosophy of Guidance, Ed. 420	0	0	3
Problems in Secondary Education, Ed. 344	3	0	0
Labor Problems, Econ. 331	3	0	0
General Sociology, Soc. 202, 203	3	3	0
Visual Aids, Ed. 308	0	0	3
Mechanical Drawing, M.E. 211, 212, 213	2	2	2
**Electives	3	3	3
Electives	0	3	2
	20	20	19

Senior Year

Local Survey: Planning a Program, Ed. 416	0	3	0
*Shopwork (selected)	0	3	0
Methods of Teaching Industrial Subjects, Ed. 422	3	0	0
Observation and Directed Teaching, Ed. 444	0	3	3
Occupational Studies, Ed. 424	0	0	3
Curriculum Problems in Industrial Arts, Ed. 482, Instructional Aids and Devices, Ed. 483, Laboratory Planning and Equipment Selection, Ed. 484	3	3	3
***Elective courses in Design	3	3	3
**Electives	3	3	3
Electives	5	0	3
	17	18	18

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

*** Elective courses must be approved by the faculty adviser.

** To be selected from the following fields: Humanities, Military Science III and IV, Language and Literature, Pure Mathematics, Pure Natural Science, and Social Science.

THE TEXTILE SCHOOL

Thomas Nelson, Dean and Director of Textile Research

Organization.—The Textile School of North Carolina State College is organized for the purpose of administration into four departments: Yarn Manufacturing and Knitting, Weaving and Designing, Textile Chemistry and Dyeing, Textile Research.

The Textile School is organized to offer technical instruction, both undergraduate and graduate, in the production and finishing of textile products. It is also organized and equipped to conduct fundamental textile research and coöperates with the School of Agriculture, and with the United States Institute for Textile Research in efforts to improve and develop new uses for cotton and other textile fibres.

Purpose.—The purpose of the Textile School is to educate men for professional service in Textile Manufacturing, Textile Management, Textile Chemistry and Dyeing, in Yarn Manufacturing, in Knitting, Weaving and Designing; to develop their capacities for intelligent leadership; to equip them to participate in commercial and public affairs; to aid in the development of the textile industry and its commerce through research and experimentation; to coöperate with the textile mills of the State in gaining, through scientific research, information that will improve the quality and value of manufactured products and increase technical skill.

Occupations. Never before in America have more opportunities in textiles been offered to young men of North Carolina and the South generally than are available today to graduates of the Textile School.

North Carolina is the largest textile manufacturing State in the South; it has more mills than any other State in America. It has the largest towel, damask, denim, and underwear mills in America; and it 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, wool, and worsted.

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 the following:

Owners of mills.

Presidents and vice-presidents of mills and other textile establishments.

Secretaries and treasurers of mills.

Managers, superintendents, and department foremen in cotton, rayon, woolen, silk, and hosiery mills.

Superintendents and foremen in mercerizing, bleaching, dyeing, and finishing plants.

Designers and analysts of fabrics.
Technical demonstrators in the 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.

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 in the Graduate Division of the College.

The professional degree of Master of Textiles may be conferred upon graduates of the Textile School after five years of professional practice in charge of important work and upon the acceptance of a satisfactory thesis.

Requirements. The requirements for graduation in the Textile School are the satisfactory completion of all the courses in one of the prescribed curricula on the pages following, a total of not fewer than 230 term credits, with not fewer than 230 honor points.

Of the minimum of 230 term credits required for graduation in the Textile School, 144 are common to all curricula; that is, 12 term credits in Mathematics, 18 in Language, 27 in Economics and Psychology, 12 in Chemistry, 15 in Physics, 12 in Engineering, 6 in Agriculture, 24 in General Textile, 12 in Military Training or Social Science alternatives, and 6 in Physical Education. Each of the curricula permits election of 18 term credits.

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, dyeing, finishing, and hosiery plants. The trips are made in chartered busses.

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. Five curricula are offered:

1. Textile Manufacturing
2. Textile Management
3. Textile Chemistry and Dyeing
4. Weaving and Designing
5. Yarn Manufacturing

Textile Manufacturing and Textile Management offer work in all Departments of the Textile School; these are therefore general curricula with one placing more emphasis on manufacturing, the other, more emphasis on economics.

Students who select Textile Chemistry and Dyeing, Weaving and Designing, or Yarn Manufacturing devote a larger percentage of their time to specilization in one Department of the Textile School.

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 by 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 B.S. in Textiles within one year. In no case should it take more than two years to complete the work for the 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.

Yarn Manufacturing and Knitting

Professor J. T. Hilton, Head of the Department
Associate Professor J. G. Lewis; Instructor G. R. Culberson

Purpose. The purpose of this Department is to instruct students in the theory and practice of producing yarns and hosiery; to coöperate with mills in solving manufacturing problems through research and experimentation; and to manufacture the yarns used in the weave room. This Department is located on the top floor of the Textile Building.

Opening and Picking.—The opening and picking equipment is placed in a separate room and consists of bale breaker, vertical opener, C.O.B. and condenser, breaker picker, and finisher lapper.

Carding and Spinning. This equipment occupies two rooms. The larger one is used for instruction. The machinery consists of cards, regular and controlled-draft drawing frames, fly frames, spinning frames, warper, spooler, winders, regular and fancy twisters, and a complete unit of combing machinery for the production of fine yarns. The smaller room contains a complete unit of carding and spinning machinery, including several types of long-draft spinning; it is used as an experimental laboratory. Thus student instruction and experimental work do not conflict. Both rooms are equipped with Parks-Cramer humidifiers.

Woolen. This equipment, placed in a separate room on the basement floor, consists of a complete woolen unit made by Davis and Furber, and a Universal winder.

Knitting. This department is equipped with a variety of circular knitting machines for making children's hose, ladies' hose, and men's plain and fancy half hose. It is also equipped with a Wildman single head, single unit full-fashioned hosiery machine, Merrow sewing machine, loopers, bottle bobbin winder, Universal winder and balances.

Research Laboratory. This laboratory contains a single strand tester, Mullen tester, yarn and cloth testing machines with autographic recorder, twist counter, crimp tester, conditioning oven, and other necessary apparatus to test cotton and rayon yarns and fabrics for moisture content, twist and tensile strength.

The curriculum in Yarn Manufacture is listed with the other Textile curricula.

Weaving and Designing

Professor T. R. Hart, Head of the Department
Professor W. E. Shinn; Assistant Professor J. A. Porter, Jr.

Purpose. The purpose of this Department is to instruct students in the theory and practice of weaving and designing fabrics ranging from simple print cloths to elaborate leno and jacquard creations, to coöperate with the home economics department of North Carolina colleges in creating consumer interest in textile products, to coöperate with mills in solving manufacturing problems through research and experimentation. This Department is located on the second floor of the Textile Building.

Weave Room.—This room contains a larger variety of looms than can be found in any textile 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. It also contains looms to produce such fabrics as print cloths, sheetings, denims and twill fabrics, ginghams, fancy shirtings, dress goods, and plush, as well as fancy leno and jacquard fabrics. The weave room has been modernized so that the students can be trained in the technique of manufacturing fancy cotton, rayon, and combination fabrics on automatic, dobby, and jacquard looms. Other equipment in the weave room includes Universal filling winders, braiders and Bahnson humidifiers.

Warp Preparation. Short warps in the Textile School are made on the silk and rayon equipment in this department, which consists of a silk and rayon skein winder, and a combination warper and beamer. Other equipment includes a slasher and cotton beaming frame.

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

the analysis of fabrics. Other designing equipment includes an enlarging camera, card cutting pianos and card lacing equipment.

The curriculum in Weaving and Designing is listed with the other Textile curricula.

Textile Chemistry and Dyeing

Professor A. H. Grimshaw, Head of the Department
Assistant Professor A. C. Hayes

Purpose.—The purpose of this Department is to instruct students in the theory and practice of dyeing, printing, and finishing yarns and fabrics; to conduct experiments; to coöperate with the mills of the State in solving problems relating to the dyeing and finishing of textile products; to dye the yarns used in the weave room to produce fabrics. This Department is located on the basement floor of the building.

Equipment.—The Dye Laboratory is fitted up with work tables, balances, steam baths, drying oven, and other apparatus for experimental dyeing, dye testing, color matching, and the testing of dyed samples by acids and alkalies. It also contains roller, spray, and screen printing apparatus.

The Dye House is equipped with kier; raw stock, package, skein, and hosiery dyeing machines; a cloth dyeing machine of the creel type; hydro-extractor; raw stock dryer and other equipment needed in the dyeing of larger quantities of material and in giving instruction in boiling out, bleaching, and dyeing raw stock, skeins, warps, hosiery, and piece goods.

The Research Laboratory contains microscopes, photo-micrographic cameras and projector, fadeometer, pH apparatus, viscosimeters, extractors, separator, analytical balances, electric oven, equipment for testing oil and finishing compounds, as well as the analytical equipment generally used by textile chemists. It also contains a dark room fully equipped for photographic work.

The curriculum in Textile Chemistry and Dyeing is listed with the other Textile curricula.

Textile Research

Thomas Nelson, Director

For a number of years the Division of Cotton Marketing, United States Department of Agriculture, stationed a representative at the Textile School to coöperate in producing new uses for cotton. Consumer packages for farm products, cotton fabrics for road making, cotton bagging, foundation fabrics for hooked rugs, and cotton bagging for sugar were some of the products of this coöperative arrangement.

The United States Institute for Textile Research has selected the Textile School as the location for its research project on warp sizing of spun rayon and cotton-spun rayon combination yarns.

The Textile School staff devotes considerable time each year to problems submitted to the School by mills.

The equipment available for research is listed under the Departments.

CURRICULUM IN TEXTILE MANUFACTURING

*Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Composition, Eng. 101, 102, 103	3	3	3
Physics for Textile Students, Phys. 111, 112, 113	4	4	4
Algebra, Trigonometry, Mathematics of Finance, Math. 111, 112, 113	4	4	4
Shopwork, M.E. 121, 122, 123	1	1	1
Engineering Drawing I, M.E. 101, 102, 103	2	2	2
Textile Principles Lab., Tex. 101, 102, 103	1	1	1
Yarn Calculations, Tex. 104	0	1	0
Cloth Calculations, Tex. 131	0	0	2
Military Science I, Mil. 101, 102, 103 or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101, 102, 103	1	1	1
	18	19	20

*Sophomore Year

Economic History, Hist. 101, 102, 103	3	3	3
Decorative Drawing, Arch. 106, or Light in Industry, Phys. 311	3	0	0
Light in Industry, Phys. 311, or Decorative Drawing, Arch. 106	0	0	3
General Inorganic Chemistry, Chem. 101, 102, 103	4	4	4
Cotton, Cotton Classing II, F.C. 201, 212	3	3	0
Yarn Manufacture I, Tex. 201, 203, 205	1	0	4
Power Weaving, Tex. 231, 232, 234	1	3	0
Fabric Structure and Analysis, Tex. 236, 237	0	2	2
Knitting I, Tex. 207, 208, 209, 211	3	1	1
†Military Science II, Mil. 201, 202, 203	2	2	2
Sport Activities, P.E. 201, 202, 203	1	1	1
	21	19	20

Junior Year

English, or Modern Language	3	3	3
General Economics, Econ. 201, 202, 203	3	3	3
Textile Calculations I, Tex. 345	0	0	3
Yarn Manufacture II, Tex. 301, 302, 303, 304	1	4	1
Dobby Weaving, Tex. 331, 332, 333, 335	1	1	4
Fabric Design and Analysis I, Tex. 341, 342	3	3	0
Dyeing I, Tex. 371, 372, 373, 375	4	1	1
Fabric Testing, Tex. 343	0	0	1
Electives	3	3	3
	18	18	19

Senior Year

Industrial Management, Personnel Management, Econ. 325A, 326A, 333	3	3	3
**Introduction to Psychology, Psychol. 200	3	0	0
**Applied Psychology, Psychol. 302	0	3	0
**Industrial Psychology, Psychol. 338	0	0	3
Yarn Manufacture IV, Tex. 401, 402, 403, 405	4	1	1
Leno Design, Tex. 441	3	0	0
Dobby Design, Tex. 443	0	3	0
Jacquard Design, Tex. 445	0	0	3
Cotton and Rayon Weaving, Tex. 431, 432, 435	1	1	3
Cotton and Rayon Dyeing I, Tex. 471, 472, 473, 474	1	4	1
Fabric Analysis, Tex. 451, 452	2	2	0
Textile Microscopy I, Tex. 475	0	0	1
Electives	3	3	3
	20	20	18

* Freshman and sophomore years for all Textile curricula.

† Or 6 credits in one or two of the following Departments: Economics, Psychology, History and Political Science, Modern Language, Sociology.

** Principles of Accounting, Econ. 301, 302, 303, may be substituted for Psychology 200, 302, 338.

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. 201, 202, 203	3	3	3
Introduction to Psychology, Psychol. 200, or Textile course	0	0	3
Qualitative and Quantitative Analysis, Chem. 211, 212, 223	4	4	4
Dyeing II, Tex. 377, 378, 379, 381, 382	5	5	2
Fabric Testing, Tex. 343	0	0	1
Electives	3	3	3
	18	18	19

Senior Year

Industrial Management, Personnel Management, Econ. 325A, 326A, 333	3	3	3
Organic Chemistry, Chem. 421, 422, 423	4	4	4
Applied Psychology, Psychol. 302, or Textile course	0	3	0
Industrial Psychology, Psychol. 338, or Textile course	0	0	3
Textile Miscroscopy II, Tex. 489, 490	1	1	0
Textile Printing, Tex. 483, 484, 485, 487	4	1	1
Cotton and Rayon Dyeing II, Tex. 477, 478, 479, 480, 481	2	5	5
Electives	6	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. 201, 202, 203	3	3	3
Accounting I, Econ. 301, 302	3	3	0
Yarn Manufacturing III, Tex. 310, 311	0	3	3
Yarn Manufacturing Lab. III, Tex. 307, 308, 309	2	2	2
Dobby Weaving, Tex. 331, 332, 333, 335	1	1	4
Dyeing I, Tex. 371, 372, 373, 375	4	1	1
Electives	3	3	3
	19	19	19

Senior Year

Industrial Management, Personnel Management, Econ. 325A, 326A, 333	3	3	3
Introduction to Psychology, Psychol. 200	3	0	0
Applied Psychology, Psychol. 302	0	3	0
Industrial Psychology, Psychol. 238	0	0	3
Machine Shop II, M.E. 227, 228, 229	1	1	1
Elements of Electrical Engineering I, E.E. 321, 322	0	3	3
Textile Calculations II, Tex. 413	3	0	0
Yarn Manufacturing V, Tex. 407, 408, 409, 411, 412	5	5	2
Manufacturing Problems, Tex. 415	0	0	3
Electives	6	3	3
	21	18	18

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. 301, 302, 303	3	3	3
General Economics, Econ. 201, 202, 203	3	3	3
Yarn Manufacture II, Tex. 301, 302, 303, 304	1	4	1
Textile courses	5	2	5
Electives	3	3	3
	18	18	18

Senior Year

Industrial Management, Personnel Management, Econ. 325A, 326A, 333	3	3	3
Marketing Methods and Sales Management, Econ. 311, 312, 313	3	3	3
Introduction to Psychology, Psychol. 200	3	0	0
Applied Psychology, Psychol. 302	0	3	0
Industrial Psychology, Psychol. 338	0	0	3
Textile courses	8	8	7
Electives	3	3	3
	20	20	19

Textile courses to be selected from:

Fabric Design and Analysis I, Tex. 341, 342	3	3	0
Dobby Weaving, Tex. 331, 332, 333, 335	1	1	4
Dyeing, Tex. 371, 372, 373, 375	4	1	1
Textile Calculations, 345 or 413	3	or	3
Yarn Manufacture IV, Tex. 401, 402, 403, 405	4	1	1
Leno Design, Tex. 441	3	0	0
Dobby Design, Tex. 443	0	3	0
Jacquard Design, Tex. 445	0	0	3
Calculating Fabric Costs, Tex. 344	0	3	0
Cotton and Rayon Weaving, Tex. 431, 432, 435	1	1	3
Cotton and Rayon Dyeing, Tex. 471, 472, 473, 474	1	4	1
Fabric Analysis, Fabric Testing, Tex. 451, 452, 343	2	2	1
Manufacturing Problems, Tex. 415	0	0	3
Color in Woven Design, Tex. 455, 456	3	3	0
Wool Manufacture, Tex. 416, 417, 418	1	4	0
Textile Microscopy I, Tex. 475	0	0	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. 201, 202, 203	3	3	3
Appreciation of Fine Arts, Arch. 111, 112, or Textile courses	3	3	0
Textile Calculations I, Tex. 345	0	0	3
Fabric Design and Analysis I, Tex. 341, 342	3	3	0
Jacquard Design, Tex. 445	0	0	3
Dobby Weaving, Tex. 335, 337, 338, 339	2	2	5
Fabric Testing, Tex. 343	0	0	1
Electives	3	3	3
	17	17	21

Senior Year

Industrial Management, Personnel Management, Econ. 325A, 326A, 333	3	3	3
Introduction to Psychology, Psychol. 200	3	0	0
Applied Psychology, Psychol. 302	0	3	0
Industrial Psychology, Psychol. 338	0	0	3
Leno Design, Tex. 441	3	0	0
Dobby Design, Tex. 443	0	3	0
Fabric Design and Analysis II, Tex. 453	0	0	3
Jacquard Design Laboratory, Tex. 447, 448, 449	1	1	1
Color in Woven Design, Tex. 455, 456	3	3	0
Cotton and Rayon Weaving, Tex. 435, 437, 438, 439	2	2	4
Fabric Analysis, Tex. 451, 452	2	2	0
Textile Microscopy I, Tex. 475	0	0	1
Electives	3	3	3
	20	20	18

The Graduate School of the University of North Carolina

STATE COLLEGE DIVISION

William Whatley Pierson, Jr., Dean, Chapel Hill

Zeno Payne Metcalf, Director of Graduate Studies at State College

GRADUATE FACULTY

Professors

D. B. Anderson, Ph.D.	Botany
L. D. Baver, Ph.D.	Agronomy
E. W. Boshart, M.A.	Teacher Education
T. E. Browne, M.A.	Teacher Education
W. H. Browne, Jr., B.E.	Electrical Engineering
*J. D. Clark, M.A.	English
J. K. Coggin, M.S.	Teacher Education
L. E. Cook, M.S.	Teacher Education
Gertrude M. Cox, M.S.	Experimental Statistics
R. W. Cummings, Ph.D.	Agronomy
R. S. Dearstyne, M.S.	Poultry
J. B. Derieux, Ph.D.	Physics
*H. A. Fisher, LL.D.	Mathematics
G. W. Forster, Ph.D.	Agricultural Economics
R. S. Fouraker, M.S.	Electrical Engineering
B. B. Fulton, Ph.D.	Entomology
M. E. Gardner, B.S.	Horticulture
A. F. Greaves-Walker, D.Sc.	Ceramic Engineering
A. H. Grimshaw, M.S.	Textile Chemistry
F. M. Haig, M.S.	Animal Husbandry
C. H. Hamilton, Ph.D.	Rural Sociology
*T. P. Harrison, Ph.D., LL.D.	English
T. R. Hart, M.S.	Textiles
*L. C. Hartley, Ph.D.	English
C. M. Heck, M.A.	Physics
J. T. Hilton, M.S.	Textiles
*L. E. Hinkle, D.S. es L.	Modern Language
E. G. Hoefer, M.E.	Mechanical Engineering
J. V. Hofmann, Ph.D.	Forestry
E. H. Hostetler, M.S.	Animal Husbandry
*A. I. Ladu, Ph.D.	English
B. E. Lauer, Ph.D.	Chemical Engineering
M. C. Leager, Ph.D.	Accounting and Statistics
J. E. Lear, E.E.	Electrical Engineering
S. G. Lehman, Ph.D.	Botany

* Humanities group advisory and minors only.

J. F. Lutz, Ph.D.	Soils
C. L. Mann, C.E.	Civil Engineering
G. K. Middleton, Ph.D.	Agronomy
T. B. Mitchell, D.Sc.	Zoölogy
Thomas Nelson, D.Sc.	Textiles
E. E. Randolph, Ph.D.	Chemical Engineering
R. B. Rice, A.M.	Experimental Engineering
R. H. Ruffner, M.S.	Animal Husbandry
G. H. Satterfield, M.A.	Chemistry
H. E. Satterfield, M.E.	Mechanical Engineering
H. B. Shaw, A.M.	Industrial Education
Luther Shaw, Ph.D.	Botany
W. E. Shinn, M.S.	Textiles
G. W. Smith, D.Sc.	Engineering Mechanics
R. O. Stevens, M.S.	Zoölogy
J. L. Stuckey, Ph.D.	Geology
B. R. Van Leer, M.S.	Civil Engineering
L. L. Vaughn, M.E.	Mechanical Engineering
B. W. Wells, Ph.D.	Botany
L. F. Williams, Ph.D.	Chemistry
A. J. Wilson, Ph.D.	Chemistry
Sanford Winston, Ph.D.	Sociology
L. Wyman, M.F.	Forestry

Associate Professors

C. H. Bostian, Ph.D.	Zoölogy
C. R. Bramer, E.M.	Civil Engineering
R. R. Brown, M.S. in E.E.	Electrical Engineering
*R. C. Bullock, Ph.D.	Mathematics
*J. W. Cell, Ph.D.	Mathematics
J. M. Clarkson, Ph.D.	Experimental Statistics
E. R. Collins, Ph.D.	Agronomy
N. W. Conner, M.S.	Engineering Mechanics
*A. M. Fountain, Ph.D.	English
R. E. L. Greene, Ph.D.	Agricultural Ecnomics
R. Harkema, Ph.D.	Zoölogy
P. H. Harvey, Ph.D.	Agronomy
F. W. Lancaster, B.S. in Ch.E.	Physics
*J. Levine, Ph.D.	Mathematics
*D. A. Lockmiller, LL.D., Ph.D.	History
J. R. Ludington, Ph.D.	Industrial Arts Education
F. H. McCutcheon, Ph.D.	Zoölogy
W. McGehee, Ph.D.	Psychology
W. D. Miller, Ph.D.	Forestry
*C. G. Mumford, Ph.D.	Mathematics

* Humanities group advisory and minors only.

*E. H. Paget, M.A.	English
J. A. Rigney, M.S.	Agronomy
I. V. Shunk, Ph.D.	Botany
J. W. Smith, M.S.	Teacher Education

Assistant Professors

W. A. Bain	Chemical Engineering
*S. T. Ballenger, A.M.	Modern Language
M. F. Buell, Ph.D.	Botany
T. C. Doody, Ph.D.	Chemical Engineering
H. C. Gauger, M.S.	Poultry
J. M. Parker, III, Ph.D.	Geology
W. A. Reid, Ph.D.	Chemistry
B. W. Smith, M.S.	Agronomy
C. F. Smith, Ph.D.	Entomology
W. G. Van Note, M.S.	Chemical Engineering
L. A. Whitford, Ph.D.	Botany

Organization

Purposes. Graduate Instruction at State College is organized to formulate and develop graduate study and research in the fields primarily of Agriculture, Engineering, and Textile Manufacturing, and in the training of teachers of these subjects. The urgent need for graduate instruction leading to research in these fields is recognized by the leaders in the occupations which depend upon the development of these branches of industry. State College, therefore, offers training for teachers, investigators, and leaders in Agriculture, Engineering, and Manufacturing. Moreover, 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, whereas there should be a fair balance of such men from every section of the country.

Facilities.—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 in a rich field for research. The State is already imbued with a spirit of progress stimulating to intellectual growth.

* Humanities group advisory and minors only.

Scholarships and Fellowships. The College offers annually graduate fellowships and a number of teaching and research fellowships. Besides these, special fellowships are supported by various commercial 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 $600 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, State College Chapter, offers $50 annually, preferably to a member of the Society, to assist in promoting 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 interest. Some organizations maintaining these scholarships have been the National Fertilizer Association, the N. V. Potash Export My., the American Cyanamids Company, the Superphosphate Institute, E. I. DuPont de Nemours and Company, the Niagara Sprayer and Chemical Company, Eli Lilly and Company, the American Potash Institute, and the Northwestern 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 every year.

DEGREES

The degrees awarded by the Graduate Division of State College are either degrees in residence: Master of Science in some specialized branch of Agriculture, Education, Engineering, and Textiles; and the Master's Degree in some profession related to the undergraduate work at State College; or Professional Degrees in the fields of Agriculture, Engineering and Textiles.

A graduate student is expected to familiarize himself with the requirements for the degree for which he is a candidate and is held responsible for the fulfillment of these requirements. This applies to the last dates on which theses may be accepted, the dates for examinations, the proper form for theses and all other matters regarding requirements for degrees.

Degrees in Residence

Admission

1. A candidate for admission to graduate study must present an authorized transcript of his collegiate record as evidence that he holds a bachelor's degree for a four years' undergraduate course from a college whose standards are equivalent to those of State College.

2. It should be clearly understood that admission to the Graduate Division does not necessarily admit a student to full graduate status. A student attains full graduate status only when he has fulfilled all the preliminary requirements of the degree which he seeks and the prerequisites of the department under whose direction he is pursuing graduate work.

Department prerequisites are determined jointly by the Administrative Board of the Graduate Division and the heads of the respective departments. In brief, it may be stated that such prerequisites usually consist of the equivalent of an undergraduate major.

3. A member of the senior class of State College may, upon the approval of the Director of Graduate Studies, register for graduate courses to fill a roster of studies not to exceed eighteen credits for any term.

4. Members of the faculty of State College having a rank higher than that of instructor may not be considered as candidates for advanced degrees at this institution.

Master of Science Degree

The Master of Science Degree is awarded at State College after completion of a course of study in a specialized field related to Agriculture, Education, Engineering, or Textiles; demonstration of ability to read a modern foreign language; and completion of a satisfactory thesis and of comprehensive examinations in the chosen field of study.

The rules and requirements governing the degree of Master of Science are set forth in some detail in the following paragraphs.

In addition to complying with these purely mechanical requirements, the candidate for the Master of Science Degree should understand something of the philosophy of graduate study. He is entering the field of research since he is engaged in a technical study of a single field of learning, and this study culminates in work upon a single problem, the subject of his thesis, in the solution of which he is required to give evidence of the mastery of graduate methods of investigations. He is concerned with the materials of learning, and with the organization and interpretation of these materials. Since the training is thought of as liberal, as great a latitude is permitted in the selection of courses as is compatible with the idea of a sharply defined field of major interest and with the requirement of interrelationship in the whole plan of study. The object is to make possible for the student a relative mastery of one of the applied sciences and to give him an introduction to critical scholarship and research methods. A beginning is made in the training of the specialist; hence the correlation of courses, the oral and written examinations, and the thesis. Since there are many possible combinations of courses, the method of administration provides for personal supervision of a student's work by a special committee.

Development of precision and method in investigation and the cultivation of power of criticism and evaluation of evidence, together with the enlarged mastery of the subject matter of a defined field, constitute a training of

indisputable value to the students who plan to enter the so called learned professions or industry. Research is the way of progress in each activity.

Credits.—1. For the Master of Science degree forty-five term credits are required.

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.

4. All work credited toward a degree in residence must be completed within six years.

Residence.—A candidate for a Master of Science degree 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 courses leading to forty-five credits in a shorter time.

Six summer schools of six weeks in residence at the College are sufficient to fulfill the residence requirement. By specific approval of the Director of Graduate Studies 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 secure permission from the Director of Graduate Studies to do twelve weeks work during a summer session. Under these provisions a minimum of four summer sessions, two of twelve weeks and two of six weeks, are required for residence.

This does not mean that the work prescribed for each individual can always be completed in the minimum length of time. Inadequate preparation very frequently makes a longer period necessary. Part-time work during a regular term is evaluated on the basis of the amount of work carried.

Courses of Study. As designated in the College Catalog under Description of Courses, the courses numbered 500 to 599 are for graduate students only, and those numbered 400 to 499 are for graduates and advanced undergraduates.

The program of the student shall contain at least twelve credits in courses of the 500 group. A maximum of 33 credits may be gained in the 400 group.

During the first term in residence the student's program will be made up by his adviser with the approval of the chief adviser of his School and the Director of Graduate Studies. Thereafter, the selection of courses shall be made by the graduate student's Advisory Committee. These advisory committees shall be appointed by the Directory of Graduate Studies not later than the student's second term of residence.

All study plans are subject to the approval of the Administrative Board of the Graduate Division.

The advanced courses taken by a graduate student shall constitute a unified plan of study. The greater percentage of courses on a graduate student's program shall be in his major field and the electives shall have graduate relationship to the major field.

Class Work. Since a graduate student is mature and has demonstrated his ability and earnestness, he is expected to assume greater individual responsibility and to work in a more comprehensive manner than the undergraduate student. 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.

Grades. A minimum grade of B must be made on all courses to obtain graduate credit.

Language Requirements. 1. A reading knowledge of at least one modern foreign language is required of candidates for the Master of Science degree. The knowledge will be tested by a special examination by the Modern Language Department.

2. A candidate for a Master of Science Degree is presumed to have a mastery of technical writing. Students will be required to demonstrate this proficiency before they are admitted to candidacy for a degree.

Thesis.—1. A candidate for the Master of Science Degree must prepare a thesis upon a subject, approved by his adviser, in the field of the student's special work. Two copies of the completed thesis must be presented to the Director of Graduate Studies at least one month before the degree is awarded.

2. Detailed instruction in the writing of the thesis will be given to the student when he is admitted as a candidate for the degree.

3. In order to be approved, a thesis must be written in correct English and scholarly form. It must demonstrate the student's ability to handle original problems and the method of development must conform to the principles of the scientific method.

Examinations.—Candidates for the Master of Science Degree must pass all required examinations in courses. In addition, two special examinations are required. The first of these, a written examination to determine the student's comprehension of his field, is to be set by the student's advisory committee and must be taken not earlier than the first month of the last quarter of residence. The second examination is oral and is especially de signed for the defense of the thesis. These examinations are to be conducted by special committees appointed by the Director of Graduate Studies and will be held after each committee member has examined the completed thesis.

These examinations must satisfy the committee which has charge of them that the candidate possesses such knowledge of his major and minor fields as may reasonably be expected, that he can draw upon his knowledge with promptness and accuracy, and that his thinking is not limited to the separate units represented by his courses.

The special committees on theses and on the examinations will report their recommendations to the Director of Graduate Studies at least one week before the end of the last quarter of residence. If the candidate's record in these respects is satisfactory, and if he has complied with all of the

requirements for the degree, the Director of Graduate Studies will report the student to the faculty for approval and recommendation to the Board of Trustees.

Fees

The graduate student in residence will pay a $2.00 registration fee for each registration. $3.00 per credit hour for all courses scheduled and $10.00 for his diploma.

Master's Degree in a Professional Field

The Master's degree was established to meet the needs of those students who expect to terminate their graduate work at the end of one year of residence or its equivalent and whose needs are not fulfilled by the requirements of the Master of Science Degree.

The candidate for this Master's Degree must meet all the regulations of the Graduate Division for students in residence. In addition he must fulfill the following requirements:

Course of Study.—The program of study for the Master's degree in a professional field is to be composed of those courses which best fit the professional aims of the student. At least 9 term credits are to be chosen from the group of courses numbered 500 for graduates only and the remainder from the group numbered 400 for advanced undergraduates and graduates.

Degrees.—Examples of the types of degree that may be awarded upon the completion of the course of study in a professional field are:

Master of Dairying
Master of Civil Engineering
Master of Vocational Education
Master of Yarn Manufacturing

The chief characteristic of these degrees is that the changes made in requirements permit, in greater measure, the satisfaction of what are represented as professional needs than do the requirements for the conventional Master of Science degree. The most important modification in the requirements and principles is the granting of relatively greater dispersion in programs of study than is permissible under a strict application of the principle of interrelation of subjects in a specialized field.

Language Requirements.—The candidate for a Master's degree in a professional field is exempt from the requirement of a reading knowledge of a modern foreign language.

Other Requirements. The other requirements for the Master's degree in a professional field, especially those concerning the thesis, residence and examination are the same as for the Master of Science degree.

Professional Degrees

Master of Agriculture
Master of Textiles
Ceramic Engineer
Chemical Engineer
Civil Engineer
Electrical Engineer
Mechanical Engineer

Significance. The professional degrees are not honorary; they are tests of ability and testimonials of accomplishment. To merit the professional degree, a candidate must write a thesis, which demonstrates his ability to attack and to solve a new problem of sufficient complexity to require distinctly original processes, 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.

Requirements

1. The degree of Master of Agriculture may be conferred upon graduates of State College after five years of service in agriculture, or upon graduates of similar 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. The candidate for the degree of Master of Agriculture must submit a satisfactory thesis which demonstrates his ability to handle an original problem related to his professional service in agriculture.
2. The degrees in Engineering or the Master of Textiles may be conferred upon graduates of State College after five years' professional practice in responsible charge of important work, upon the acceptance of a thesis on a subject related to the practice in which the applicant has been engaged.
3. Applications for the degree must be presented to the Director of Graduate Studies not less than nine months before the degree is conferred.
4. With the application for a degree, the candidate must present for approval the subject and outline of a thesis and a detailed statement of his professional work since graduation.
5. The preliminary copy of the thesis must be submitted to the Director of Graduate Studies at least four months before the commencement at which the degree is to be conferred. The completed thesis in approved form must be submitted at least two months before the degree is awarded.
6. When his thesis and detailed statement of his professional work have been approved, the candidate shall appear before his advisory committee for oral or written examination on his professional work and thesis.

Fees

The candidate for a Professional Degree will pay $10.00 when he matriculates and $15.00 for his diploma.

The Degree of Doctor of Philosophy

The Degree of Doctor of Philosophy is offered in coöperation with The University at Chapel Hill under supervision of the Graduate School of the Consolidated University of North Carolina.

The Degree of Doctor of Philosophy is offered in certain specified departments. Graduate students who expect to become candidates for the degree are already registered in the Departments of:

Agricultural Economics	Entomology
Agronomy	Plant Pathology
Rural Sociology	

Offerings will be provided in other departments as rapidly as personnel and facilities can be developed.

Information

Further information about graduate work at State College may be secured from Z. P. Metcalf, Director of Graduate Studies, N. C. State College, Raleigh, N. C.

DIVISION OF COLLEGE EXTENSION

Edward W. Ruggles, Director

Purpose. The College Extension Division is organized to carry the practical and cultural advantage of college studies to persons who cannot attend classes on the campus, and to groups and communities that may profit by the service offered through the following means.

Extension Classes are organized where at least fifteen persons are interested and willing to take up the same subject. Such matters as the distance from the college, the nature of the subject, and the availability of instructors must be taken into consideration.

Correspondence Courses for college credit are offered in Agronomy, Animal Husbandry, Horticulture, Soils, Poultry, Agricultural Economics, Rural Sociology, Chemistry, Education, Economics, English, Geology, History, Architectural Engineering, Ceramic Engineering, Mechanical Engineering, Mathematics, Modern Languages, Sociology, Safety, and Zoölogy. The list of these courses is being added to as rapidly as possible. Complete information concerning them is included in the Bulletin of Correspondence Courses.

Correspondence Courses of a practical nature are offered in Business English, Mathematics, Industrial Electricity, Land Surveying, Plumbing, Engineering Drawing, Air Conditioning, Heating and Ventilation, Building and Estimating, Sheet metal Pattern Drafting, Municipal Administration, Poultry, Business Law, Diesel Engines, and Vegetable Gardening. In addition, the courses in Ceramic Engineering may be taken as practical where no credit is desired.

Short Courses are offered by the College Extension Division to tie up the facilities of the several Schools of State College with the trades and industries of North Carolina into a permanent educational program. In carrying out this program, short courses of a practical nature are offered every year which are increasing in popularity. During the present school year the following short courses and institutes are scheduled: Electrical Meters and Relays, Engineers, Surveyors, Plumbing and Heating Contractors, Gas-Plant Operators, Water-Works Men, Retail Coal Merchants, Electrical Contractors, Street Superintendents, Amateur Photographers, Sanitarians, Building Inspectors, Rayon, and a Safety School for Truck Operators. Additional courses are being added as the demand arises.

College Extension Lectures by members of the faculty and concerts by the college musical organizations are available to any high school, civic club, woman's club, science club, agricultural or engineering meeting or organization, desiring to put on a good lecture or musical program.

Reading Courses are offered to graduates and undergraduates who desire to continue their intellectual growth and to keep abreast of the advances made both in their specific field and in relating fields.

Bulletins describing the various functions of the Division will be gladly supplied on request. Write to Edward W. Ruggles, Director, College Extension Division, North Carolina State College, Raleigh, North Carolina.

Full Information.—Any person interested in extension classes or correspondence courses should write to the College Extension Division, requesting the Extension Bulletin, which contains complete information concerning methods of instruction, fees, and the conditions upon which College credit will be granted.

THE SUMMER SESSION

Time; Work.—Beginning June 10, 1942, the Summer Session will continue six weeks. The work, directed by the regular College Officers of Administration and conducted largely by the Faculty, maintains the College standards and warrants College credit toward degrees.

Advantages. Special advantages are offered those desiring to get teachers' certificates, or to renew or raise the grade of a certificate; also to teachers with ambition to advance culturally and professionally. College students may remove conditions or gain additional credits. Applicants for admission to College may add needed credits for entrance.

Cultural Courses. Although the Summer Session at State College conducts courses specifically technical in Agriculture, Engineering, and Textile, and confines its Teacher Training to these departments, general courses of broad cultural value are offered in English, Modern Languages, Mathematics, Chemistry, Physics, Botany, Zoölogy, and the Social Sciences.

Full Information regarding the Summer Session is given in the Summer Session issue of *State College Record*, which may be obtained from W. L. Mayer, Registrar, State College Station, Raleigh.

IV. DESCRIPTION OF COURSES

AERONAUTICAL ENGINEERING

Courses for Advanced Undergraduates

Aero. E. 210. General Aeronautics 3-0-0 or 0-3-0

Prerequisites: Math. 101, 2, 3.

Required of sophomores taking Aeronautical Engineering and students participating in the Civilian Pilot Training Program.

A study of the practical aspect of aircraft operation. It embraces Navigation and Meteorology.

Text: Lyons, *Practical Air Navigation* and Haynes, *Meteorology for Pilots.* Staff.

Aero. Engr. 310. Elementary Aeronautics 0-0-3

Prerequisites: Phys. 201, 202, 203.

Required of juniors taking Aeronautical Engineering.

A study of the airplane and simple aerodynamics. Carter, *Simple Aerodynamics and the Airplane.* Mr. Parkinson.

Aero. Engr. 332, 333. Air Transportation. 0-3-3

Prerequisite: Aero. Engr. 310.

Required of seniors taking Aeronautical Engineering.

The various phases of airport design, air transportation and airline operation are studied in this course. This includes a survey of existing conditions, factors governing development, topographic survey, runway layout, methods of aircraft operations, personnel organization and aviation law. Practical examples are studied at the University-owned and operated airport. *Lecturer's Notes.* Mr. Parkinson.

Aero. Engr. 351, 352. Advanced General Aeronautics 6-6 0 or 0 6-6

Prerequisite: Aero. Engr. 250.

Elective.

Ground school course for those students wishing to receive advanced flight training under the Civil Aeronautics Administration Program. The scope of the course embraces Navigation, Meteorology, Parachutes, Aerodynamics and Aircraft, Engines, Instruments, and Radio, Navigation Aids as required for a Commercial Pilot's Certificate. *Lecturer's Notes.* Staff.

Aero. Engr. 421, 422, 423. Airplane Design 3-3-3

Prerequisites: E. M. 213, 222, C. E. 321 and Aero. Engr. 310.

Required of seniors taking Aeronautical Engineering.

A study of the design and construction of airplanes. Niles & Newell, Vols. I & II, *Airplane Structures;* Teichmann, *Airplane Design Manual.*

Mr. Rautenstrauch.

Aero. Engr. 431, 432, 433. Aerodynamics 3-3-3

Prerequisites: Math. 303, Aero. Engr. 310.

Required of seniors taking Aeronautical Engineering.

A study of classical flow theory, viscous flow, airplane performance and stability, accelerated flight, and airworthiness specifications. Diehl, *Engineering Aerodynamics;* Jones, *Elements of Practical Aerodynamics.*

Mr. Rautenstrauch.

Aero. Engr. 441, 442, 443. Aeronautical Laboratory 1-1-1

Prerequisites: M. E. 313, 314, 315.

Required of seniors taking Aeronautical Engineering.

Advanced study and testing in the field of air and liquid-cooled internal combustion engines and their auxiliaries. Tests on air foils and models; tests of wings and structural members; test of fuels and lubricants, and tests of applied metallurgy. Staff.

Aero. Engr. 451, 452. Aircraft Engines 3-3-0

Prerequisites: M. E. 307, 308, 309.

Required of seniors taking Aeronautical Engineering.

The practical aspect of aircraft engine operation including design, carburetors, magnetos, super-chargers, fuels, oils, fuel and oil systems, engine installations, trouble shooting and accessories. *Lecturer's Notes.*

Mr. Parkinson.

Aero. Engr. 461. Aircraft Instruments and Navigation 3-0-0

Prerequisite: Aero. Engr. 310 or 351 and 352.

Elective.

This course deals with the instruments used in aircraft engine operation, flight indication, and in navigation. The uses, principle of operation, and calibration is studied in detail. The fundamentals of navigation include problems in navigation such as course plotting, radius of action from fixed and moving bases and interception. *Lecturer's Notes.* Mr. Parkinson.

Aero. Engr. 471. Aircraft Propeller Design 0-0-3

Prerequisite: Aero. Engr. 310.

Elective.

The various theories are discussed in this design course. This embraces effect of blade shape, tip speed, and gearing on propeller performance. The various types of propellers are studied in detail. Weick, *Aircraft Propeller Design.* Mr. Parkinson.

Courses for Graduates Only

Aero. Engr. 531, 532, 533. Advanced Aerodynamics. 3-3-3

Prerequisites: Aero. Engr. 431, 432, 433.

Research; a study of test performance; a series of experiments, the compilation and interpretation of the results. Mr. Parkinson.

Aero. Engr. 541, 542, 543. Aeronautics Research.

Prerequisites: Aero. Engr. 441, 442, 443.

Research and thesis in connection with an aeronautical project.
Mr. Parkinson.

AGRICULTURAL ECONOMICS

Courses for Advanced Undergraduates

Agr. Econ. 202. Agricultural Economics. 0 0-3

Prerequisites: Econ. 205 or Econ. 201, 202, 203.

Required of sophomores in Agriculture.

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, Hamilton, Leager.

Agr. Econ. 212. Land Economics. 0 3-0

Prerequisites: Econ. 205 or 201, 202, 203.

Required of sophomores in Forestry, and in Wildlife Conservation and Management.

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.

Agr. Econ. 303. Farm Management I. 0-0-3

Prerequisites: Econ. 205 or 201, 202, 203.

Required of juniors in Agricultural Economics, Agriculture and Agricultural Education.

Successful operation of the farm, farm planning, management of labor, farm work programs, use of machinery, and farm administration.

Messrs. Forster, Greene.

Agr. Econ. 313. Farm Accounting. 0-0-3

Prerequisite: Econ. 205.

Required of juniors in Vocational Agriculture.

Farm accounting, preparation of inventories of farm property, simple financial statements, methods of keeping farm records, analysis and the interpretation of results obtained from farm business transactions.

Mr. Greene.

Agr. Econ. 332. History of the Agricultural Adjustment Program 0-3-0

Elective for juniors and seniors in Agriculture.

Economics of the Agricultural Adjustment Acts, and of the Agricultural Conservation Programs; the effect of the programs on production and prices of cotton, tobacco, wheat, corn, and hogs. Mr. Barnes.

Agr. Econ. 333. The Agricultural Adjustment Program. 0-0-3

Prerequisite: Agr. Econ. 332. Elective for juniors and seniors in Agriculture.

Methods and routine for administration of the Agricultural Conservation Program and the crop control measures now in effect; field and office work with aerial photographs and with the forms prescribed for use with the Program with a view to preparing students for the summer work.

Messrs. Patton, Barnes.

Courses for Graduates and Advanced Undergraduates

Agr. Econ. 402, 403. Farm Cost Accounting. 0-3-3

Prerequisites: Econ. 205 or 201, 202, 203, and 301, 302, 303.

Required of seniors in Agricultural Economics.

Accounting applied to farm transactions, the preparation of financial statements, the methods of keeping farm records, analysis of an individual farm record, the interpretation of the results from cost-accounting.

Mr. Greene.

Agr. Econ. 411. Agricultural Marketing. 3-0-0

Prerequisites: Econ. 205 or 201, 202, 203.

Required of seniors in Agricultural Economics, Agriculture, and Vocational Education.

Successful marketing of farm products, market organization and control, price-making forces; critical examination of the present system of marketing farm products. Messrs. Clement, Leager.

Agr. Econ. 412. Problems of Land Economics. 0 3-0

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 202, and 6 additional term credits in Economics.

Elective.

Land classification; ownership and acquisition of land; tenancy and land ownership; the functions of the landlord and the tenant; land valuation and land speculation. Messrs. Forster, Hamilton.

Agr. Econ. 421. Marketing Methods and Problems. 3-0 0

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 202, and 6 additional term credits in Economics.

Required of seniors in Agricultural Economics.

The problems and methods involved in the marketing of farm products; suggestions for improvement. Mr. Clement.

Agr. Econ. 422. Agricultural Coöperation. 0-3-0

Prerequisites: Econ. 205 or 201, 202, 203.

Required of seniors in Agricultural Economics.

Local community coöperation, both economic and social; farmers' buying, selling, and service organizations. Messrs. Clement, Lange.

Agr. Econ. 423. Farm Management II. 0-0-3

Prerequisite: Agr. Econ. 303.

Required of seniors in Agricultural Economics.

The factors involved in the management and organization of typical farms in the State. Mr. Greene, Mr. Forster.

Agr. Econ. 431. Agricultural Prices. 3-0 0

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 202, 303.

Elective.

Behavior of agricultural prices; their relation to consumption, production of farm products, and marketing practices; methods of price analysis applied to agricultural products. Mr. Lange.

Agr. Econ. 432. Agricultural Finance. 0-3-0

Prerequisites: Econ. 205, Agr. Econ. 202, and 6 additional term credits in Economics.

Elective.

Financing the production and marketing of agricultural products. Consideration of farm mortgage credit, personal and intermediate credit, and agricultural taxation. Mr. Leager.

Agr. Econ. 442. Cotton and Tobacco Marketing. 0-3-0

Prerequisites: Econ. 205, Agr. Econ. 202, Agr. Econ. 411, and 3 additional credits in Economics.

Required of seniors in Agricultural Economics.

The problems, methods, and practices used in the marketing of tobacco and cotton. Messrs. Forster, Clement.

Courses for Graduates Only

Agr. Econ. 501. Economics of Agricultural Production. 3-0-0

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 202, 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. 502. Farm Organization and Management. 0-3-0

Prerequisites: Econ. 205, Agr. Econ. 303, 423, 501, and 6 additional term credits in Economics.

The extension of the economic principles discussed in Agr. Econ. 501, and their application to the problems of farm organization and management. Mr. Forster.

Agr. Econ. 503. Agricultural Finance. 0 0-3

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 432, and 6 additional term credits in Economics.

Problems in financing agricultural production and marketing. A history of the development of financial institutions designed to serve agriculture. Mr. Leager.

Agr. Econ. 513. Coöperative Marketing Methods and Practices. 0-0-3

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 411, and 6 additional term credits in Economics.

A critical study of the methods and practices used by large agricultural coöperatives. Mr. Clement.

Agr. Econ. 521, 522, 523. Research in Agricultural Economics. 3 3 3

Prerequisites: Economics 201, 202, 203; 408, 409, 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 and quantitative, inductive and deductive methods of research procedure; choice of projects, planning, and execution of the research project. Messrs. Forster, Greene.

Agr. Econ. 531, 532, 533. Analysis of National Policies and Agricultural Action Programs. 3 3-3

Prerequisites: Econ. 201, 202, 203, Agr. Econ. 202 and six additional term credits in Economics or Agricultural Economics.

Critical discussion of modern methods of economic analysis from the viewpoint of their applicability to problems of economic policy: an examination of the major agricultural action programs in the United States; the analysis of principles of economic policy with regard to their effect upon national and farm income and income distribution. Mr. Lange.

AGRICULTURAL ENGINEERING

Courses for Undergraduates

Agr. Eng. 202. Farm Equipment. 0 3 0

Prerequisites: Math. 100 or Physics 115 or 201. Required of sophomores in Agriculture.

Modern equipment and buildings for the farm. Mr. Hendrix.

Agr. Eng. 212. Farm Engines. 0-3-0

Prerequisite: Physics 115 or 201. Required of sophomores in Agr. Eng. and juniors in Animal Production and in Dairy Manufacturing.

The principles of gas-engine operation and their application to farm uses; selection, operation, and repair of engines. Mr. Giles.

Agr. Eng. 222. 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.

Courses for Advanced Undergraduates

Agr. Eng. 303. Terracing and Drainage. 0-0-3

Prerequisites: Soils 201 and Agr. Eng. 202.

Required of juniors in Agr. Eng., juniors in Floriculture, Pomology and Vegetable Gardening, and of seniors in Animal Production, Poultry Science, and Farm Business.

The different methods of disposing of surplus water and the prevention of erosion. Messrs. Weaver, Hendrix.

Agr. Eng. 313. Farm Machinery and Tractors. 0-0-3

Prerequisite: Agr. Eng. 202.

Required of seniors in Agr. Eng., and in Poultry Science.

The design, construction, and operation of modern labor-saving machinery for the farm. Mr. Giles.

Agr. Eng. 322. Farm Buildings. 0-3-0

Prerequisite: Agr. Eng. 202.

Required of juniors in Agr. Eng., and seniors in Agr. Economics.

The design, construction, and materials used in modern farm buildings. Mr. Weaver.

Agr. Eng. 331, 332. Farm-Shop Work. 3-3-0

Prerequisite: Agr. Eng. 202.

Required of juniors in Agr. Eng., and in Vocational Agriculture.

Lecture and laboratory practice, in drafting, sharpening farm tools, making concrete, woodworking, cold-metal working, forging, soldering, and pipe fitting. Mr. Giles.

Agr. Eng. 333. Teaching Farm-Shop Work. 0-0-3

Prerequisites: Agr. Eng. 331 and 332.

Elective for juniors and seniors in Vocational Agriculture.

The use and care of power tools; shop management and methods of presenting the subject matter. Messrs. Giles, Coggins.

Courses for Graduates and Advanced Undergraduates

Agr. Eng. 403. Erosion Prevention. 0-0-3

Prerequisite: Agr. Eng. 303.

Required of seniors in Agr. Eng.

The causes and effects of erosion, and the methods of conserving our greatest national resource—our fertile soil. Mr. Weaver.

Agr. Eng. 423. Farm Structures. 0-3-0 or 0 0 3

Prerequisite: Agr. Eng. 322.

Required of seniors in Agr. Eng.

Modern building methods as applied to farm structures; the use of labor-saving barn equipment and methods of reducing labor to a minimum; the placing of the farm group in relation to topography and farm activities, for economy, appearance, and utility. Mr. Weaver.

Agr. Eng. 432. Rural Electrification. 0-3-0

Prerequisite: Agr. Eng. 322.

Required of seniors in Agr. Eng.

Problems involved in the distribution, uses, and costs of electricity on the farm. Mr. Weaver.

Agr. Eng. 481, 482, 483. Special Problems in Agricultural Engineering. 3-3-3

Prerequisites: Agr. Eng. Three credits in 300 courses.

Only one term required of seniors in Agr. Eng., other two elective.

For students who desire advanced work in one of the following subjects: Farm Engines, Tractors, Farm Mach., Buildings, Conveniences, Rural Electrification, Erosion Control and Drainage.

Messrs. Weaver, Giles, Hendrix.

Agr. Eng. 491, 492, 493. Senior Seminar. 1-1-1

Prerequisite: Senior standing in Agr. Eng.

Required of seniors in Agr. Eng.

Students will be assigned special problems the results of which are to be presented to the class. Messrs. Weaver, Giles, Hendrix.

ANIMAL HUSBANDRY AND DAIRYING

Courses for Undergraduates

A. H. 202. Animal Nutrition I. 0-3-0 or 0 0-3

Prerequisites: Chem. 101, 102, 103.

Required of sophomores in Agriculture.

Animal nutrition; composition of the animal body; digestion; nutrients; feeding standards; calculating rations. Messrs. Ruffner, Haig.

Courses for Advanced Undergraduates

A. H. 301. Farm Meats I. 3-0-0 or 0-3-0 or 0-0-3

Elective for juniors and seniors in Agriculture. Required of juniors in A. H. and seniors in Pomology and Poultry Science.

Composition and value of meat, with practice in slaughtering and cutting. Mr. Pierce.

A. H. 302. Farm Meats II. 0-3-0

Prerequisite: A. H. 301.

Elective for juniors and seniors in Agriculture.

Study and practice in making retail cuts and curing pork, beef, and lamb. Mr. Pierce.

A. H. 303. Advanced Stock Judging. 0-0-3

Elective for juniors and seniors in Agriculture.

Market and show-ring requirements for horses and mules, beef cattle, dairy cattle, sheep, and swine. Breed characteristics of these animals in detail; practice judging of the relation of form to function in livestock. Messrs. Haig, Pierce.

A. H. 311. Comparative Anatomy and Physiology of Domestic Animals. 3-0-0

Prerequisite: Zool. 102.

Elective for juniors and seniors in Agriculture.

The structure and functions of the animal body. Laboratory, lectures and recitations. Mr. Grinnells.

A. H. 313. Sheep Production. 0 0-3

Elective for juniors and seniors in Agriculture. Required of seniors in Animal Husbandry.

Establishment, care, and management of the farm flock.

Mr. Foster.

A. H. 321. Dairy Cattle and Milk Production. 3-0-0

Elective for juniors and seniors in Agriculture. Required of seniors in Poultry Science and Agricultural Engineering.

Management of dairy cattle for economical milk production, including dairy-breed characteristics, adaptation, selection, management, feeding, calf raising, dairy barn equipment. Mr. Haig.

A. H. 322, 323. History of Breeds of Farm Animals. 0 3-3

Required of juniors in Animal Prod. Elective for juniors and seniors in Agriculture.

Types, characteristics, and history of the leading strains and families of the different breeds of farm animals.

Messrs. Ruffner, Haig, Hostetler.

A. H. 331. Swine Production. 3-0-0

Required of juniors in Animal Production and seniors in Poultry Science. Elective for juniors and seniors in Agriculture.

Adaptability of swine, with emphasis on feeding, judging, and management. Mr. Hostetler.

A. H. 332. Testing of Milk Products. 0 4 0

Elective for juniors and seniors in Agriculture. Required of seniors in Animal Husbandry and juniors in Dairy Manufacturing.

Testing of milk and milk products for butterfat, acidity, adulteration, preservatives, and sediment. Mr. Clevenger.

A. H. 333. Cheese Making. 0-0-3

Elective for juniors and seniors in Agriculture. Required of juniors in Dairy Manufacturing.

Lectures and laboratory practice in making various soft and hard cheeses usually made on a farm or in a cheese factory. Mr. Clevenger.

A. H. 341. Dairying. 3 0-0 or 0-3-0

Required of juniors in Animal Prod. and seniors in Vegetable Gardening. Elective for juniors and seniors in Agriculture.

Fundamentals of dairy-herd management in the production of milk and cream on the farm. Laboratory work: the use of the Babcock Test, butter making on the farm, operation of cream separators. Mr. Haig.

A. H. 342. Dairy Manufacture Practice. 0-3-0

Elective for juniors and seniors in Agriculture. Required of juniors in Dairy Manufacturing.

Lectures and laboratory practice on the business and factory management used in dairy plants. Mr. Clevenger.

A. H. 343. City Milk Supply. 0-0-4

Elective for juniors and seniors in Agriculture. Required of juniors in Dairy Manufacturing.

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 by the dairymen supplying the milk; the problems of the retail distributor of raw milk. Mr. Clevenger.

A. H. 351. Horse and Mule Production. 3-0-0

Elective for juniors and seniors in Agriculture.

Methods in production and management of horses and mules for work on farms under Southern conditions. Special study of home-grown feeds for horses and mules at work or idle. Mr. Haig.

A. H. 352. Common Diseases. 0-3-0

Elective for juniors and seniors in Agriculture.

Contagious, non-contagious, and parasitic diseases of farm animals. Laboratory, lectures, recitations. Mr. Grinnells.

A. H. 353. Animal Hygiene and Sanitation. 0-0-3

Elective for juniors and seniors in Agriculture. Required of juniors in A. H. and of senior Teachers of Agriculture.

Animal health and prevention of disease as affected by environment. Lectures, reference reading, recitations. Mr. Grinnells.

A. H. 361. Animal Nutrition II. 3-0-0 or 0-0-3

Prerequisite: A. H. 202.

Required of juniors in Animal Prod. Elective for juniors and seniors in Agriculture.

Feeding stuffs used in America; laws controlling feeding stuffs; preparation of feeds; home-mixed and commercial feeds.

Messrs. Ruffner, Haig.

A. H. 362. Dairy Machinery. 0-1-0

Elective for juniors and seniors in Agriculture. Required of seniors in Dairy Manufacturing and Agr. Engineering.

Lecture and demonstration on the installation, kind, care, and handling of dairy-plant equipment, including the refrigerating unit, pipe fitting, soldering. Mr. Clevenger.

A. H. 371. Creamery Butter Making. 4-0-0

Elective for juniors and seniors in Agriculture. Required of juniors in Dairy Manufacturing.

Principles and practices of factory butter making, from the care of the cream on the farm through the different processes until ready for marketing.

Mr. Clevenger.

A. H. 372. Beef Cattle Production. 0-3-0

Elective for juniors and seniors in Agriculture. Required of seniors in Animal Husbandry.

A study of the feeding, care, and adaptation of beef cattle to North Carolina conditions. Mr. Foster.

A. H. 381. Ice-cream Making. 4-0-0

Elective for juniors and seniors in Agriculture. Required of juniors in Dairy Manufacturing.

Standardizing of mixing and freezing ice-cream, sherbets, and other frozen products, and the physical principles involved; types of freezers, flavoring materials, fillers and binders; ice-cream standards. Theory and practice of refrigeration; its use in the ice-cream plant. Mr. Clevenger.

A. H. 391, 392, 393. Senior Seminar. 1 1-1

Prerequisite: A. H. 202.

Required of seniors in A. H.

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. 394. Judging Dairy Products. 0-0-1

Elective for juniors and seniors in Agriculture. Required of seniors in Dairy Manufacturing.

A course of training for students in judging all dairy products according to official standards and commercial grades. Mr. Clevenger.

A. H. 395. Summer Practicum. 3 credits

Prerequisites: 18 credits in Animal Husbandry.

Required of all students in Animal Production and Dairy Manufacturing.

This course requires a minimum of six weeks practical work on an approved livestock farm or in a creamery. If the work is done at the College farms or College creamery, no remuneration other than specified credit will be allowed. Each student will be required to submit an outline of his proposed work during the spring term and a final report of the work done during the fall term. Staff.

Courses for Graduates and Advanced Undergraduates

A. H. 401, 402, 403. Dairy Manufactures. 3-3-3

Prerequisites: A. H. 202 and 12 hours of the dairy manufacturing courses.

Required of seniors in Dairy Manufacturing.

Special problems dealing with the manufacture and marketing of dairy products. Mr. Clevenger.

A. H. 412. Animal Nutrition III. 0-3-0

Prerequisites: A. H. 202, A. H. 361.

Elective for seniors in Agriculture.

A study of the chemistry and physiology of nutrition and the processes of animal life; recent scientific publications studied. Mr. Puffner.

A. H. 413. Herd Improvement. 0-0-3

Prerequisites: A. H. 202, 341, 361.

Elective for juniors and seniors in Agriculture. Required of juniors in A. H.

This course is designed for training students as supervisors of Herd Improvement Associations in North Carolina. Rules for Advanced Registry are studied; practical work in keeping feed costs, the Babcock Test, and bookkeeping necessary for dairy associations. Mr. Haig.

A. H. 421. Animal Breeding. 4-0-0

Elective for juniors and seniors in Agriculture. Required of seniors in Animal Husbandry.

A study of breeding and improvement of domestic animals; a first-hand study of successful breeding establishments and their problems.
Mr. Ruffner.

A. H. 432. Pure-Bred Livestock Production. 0-3-0

Prerequisites: A. H. 202, 331.

Elective for seniors in Agriculture. Required of seniors in Animal Husbandry.

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.

A. H. 433. Stock Farm Management. 0-0-3

Prerequisite: A. H. 202.

Elective for juniors and seniors in Agriculture. Required of seniors in Animal Husbandry.

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. 441, 442, 443. Problems in Advanced Animal Breeding.
3 0-0, 0 3 0, 0-0 3

Prerequisite: A. H. 421.

Elective for seniors in Agriculture.

A study of the physiology of reproduction. Methods and problems of breeders; influence of pedigree. herd books, and Mendelism in animal breeding. Mr. Ruffner.

Courses for Graduates Only

A. H. 501, 502, 503. Research Studies in Animal Husbandry. 3-0-0 or 0-3-0 or 0-0-3

Prerequisite: Eighteen credits in Animal Husbandry.

An intensive study of experimental data. Staff.

A. H. 511, 512, 513. Advanced Nutrition. 3-0-0, 0-3-0, 0-0-3

Prerequisites: A. H. 202, 361.

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. 521, 522, 523. 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. 531, 532, 533. Seminar. 1-1-1

Subjects assigned to be reviewed and discussed. Review of literature, scientific reports and Experiment Station bulletins. Oral and written reports. Staff.

ARCHITECTURE AND ARCHITECTURAL ENGINEERING

Courses for Undergraduates

Arch. 100. Pencil Sketching. 3-0-0, 0-3-0, 0-0-3 or 1-1-1

Required of seniors in L. A., and sophomores in Ind. Arts. Elective for Engineering and Textile students.

Quick sketching of objects as seen and imagined in perspective; elementary principles of perspective, especially as applied to the visualization of imagined objects. *Mimeographed Notes and Problems Sheets.*

Messrs. Paulson, Baumgarten.

Arch. 101. 102, 103. Freehand Drawing 1, 2, and 3. 2-2-2

1. Required of juniors in Arch.. and Arch. Eng. 2-0 0

Water color rendering. Nature and qualities of pigments: theory of color and of tone; presentation of decorative and of pictorial subjects in monochrome and in full color. Guptill: *Reference to Color.*

2. Required of juniors in Arch., Arch. Eng., and L. A. 0 2-0

Sketching in pencil, and pen and ink from models, casts and nature. Emphasis upon tonal value, pattern of darks, character and variety of line, and accenting. Lettering. Watson: *Pencil Sketching.*

3. Required of juniors in Arch., Arch. Eng., and L. A. 0-0-2

Charcoal Drawing from architectural casts and models; emphasis upon delicacy and gradation of shade and shadow; value sketches of composition projects. Mr. Paulson.

Arch. 104s. 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. Paulson: *Art Appreciation for Teachers.* Mr. Paulson.

Arch. 105. Art Principles in Industry. 3-0-0

Elective for Engineering and Textile students. required of sophomores in Industrial Arts.

Line, form, color, and aesthetic principles of practical art applicable to the design of articles for manufacture. *Mimeographed Notes.* Mr. Paulson.

Arch. 106. 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. *Mimeographed Problem Sheets.*

Mr. Paulson.

Arch. 107. Architectural Drawing. 3-3-0

Required of freshmen in Architecture. M. E. 105 and 106 may be substituted for Arch. 107.

[Drafting Practice.] Use of instruments in drawing plans, elevations, sections; projections; architectural lettering and conventions; tracing and blueprinting; elements of architecture and introduction to design. Pickering: *Architectural Design.* Mr. Williams.

Arch. 111, 112, 113. Appreciation of Fine Arts, Architecture, Painting, Sculpture. 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. Reinach: *Apollo; University Prints; Mimeographed Notes.* Gardner: *Art Through the Ages.* Mr. Paulson.

Arch. 114. Clay Modeling. 1-1-1

Prerequisite: Arch. 100.

Required of seniors in Arch.

Modeling of ornament, reliefs, and full round projects in clay or wax; moulds and plaster casting; small scale building detail models. Lectures, laboratory, and critiques. Mr. Grady.

Courses for Advanced Undergraduates

Arch. 201, 202, 203. Elements of Architecture I, II, and III. 3-3-3

Prerequisites: M. E. 105, 106, or Arch. 107.

Required of sophomores in Arch., Arch. Eng., and L. A.

Exercises and studies of architectural elements and details, walls, openings, etc. The orders of architecture and their application to simple problems in composition and design. Turner: *Fundamentals of Architectural Design;* Ramsey and Sleeper: *Graphic Standards.*

Messrs. Shumaker, Williams, Grady.

Arch. 205. Shades and Shadows. 2 0-0

Prerequisite: M. E. 107.

Required of sophomores in Arch. and juniors in L. A.

The determination of conventional shades and shadows as they occur on rendered drawings. Buck, Ronan and Oman: *Shades and Shadows.*

Mr. Grady.

Arch. 206. Perspective Drawing. 1-0-0

Prerequisite: M. E. 107.

Required of sophomores in Arch., Arch. Eng., and of juniors in L. A. and Agr. Engr.

Theory of perspective with special applications to illustration and design. Lectures and drawing. Turner: *Fundamentals of Architectural Design.*

Mr. Baumgarten.

Arch. 207. Historic Motives in Textiles. 0-3-0

Elective for students of junior standing.

Chronologic development of ornament motives; the adaptation of historic motives to modern textile design. Hamlin: *History of Ornament.*

Mr. Paulson.

Arch. 211, 212, 213. Freehand Drawing 4, 5, and 6. 3-3-3

Prerequisite: Arch. 103.

Required of fifth year Arch., elective for others.

The purpose of this course is to give the student a mastery of presentation in his own chosen medium. The first term (Arch. 211) will be devoted principally to still life; the second (Arch. 212) to landscape; the third (Arch. 213) to figure drawing. Personal technique encouraged; sound principles of drawing insisted upon. Mr. Paulson.

Arch. 301, 302, 303. Intermediate Design, B-1, B-2, B-3. 3-3-3

Prerequisites: Arch. 201, 202, 203.

Required of juniors in Arch., and Arch. Eng.

Problems in elementary composition, design, planning and rendering. Library research. Registration with the Beaux Arts Institute of Design may be required. *Beaux Arts Institute Problems.*

Messrs. Williams, Baumgarten, Grady.

Arch. 304. Photographic Practice. 0-0-1

Required of juniors in Arch., and Arch. Eng.

The practical use of photography as an aid in architectural rendition. *Lectures, Notes,* and *Assignments.* Mr. Paulson.

Arch. 305. Working Drawings. 0-0-2

Prerequisites: Arch. 201, 202, 203.

Required of sophomores in Arch. and seniors in Arch. Engr.

The preparation of working drawings of sections and details of construction. Ramsey and Sleeper: *Graphic Standards;* Knoblock: *Good Practice in Construction.* Messrs. Williams, Grady.

Arch. 321, 322, 323. History of Architecture 1, 2, and 3. 3-3-3

Prerequisite: Arch. 203.

Required of juniors in Arch., Arch. Eng., and L. A.

The origin and development of historic styles of architecture from antiquity to the nineteenth century. Illustrated lectures, library references, sketches. Fletcher: *History of Architecture;* Hamlin: *History of Architecture.*

Mr. Baumgarten.

Arch. 325. History of Sculpture and Mural Decoration. 0-0-2

Prerequisite: Arch. 203.

Required of seniors in Arch. Eng. and of juniors in Arch.

The development of sculptural and mural art as adjuncts to architecture, ancient to modern; critique of modern decoration supplementary to architecture. Mimeographed notes, library reference and illustrated lectures.

Messrs. Williams, Grady.

Arch. 351, 352. Architectural Design E-1, E-2. 3-3-0

Prerequisite: Arch. 303.

Required of seniors in Arch. Eng.

Advanced Architectural Design studied especially from the viewpoint of structure; projects developed with wall and spanning sections; rendered presentation of practical constructive programs.

Messrs. Williams, Baumgarten, Grady.

Arch. 353, 354, 355. Architectural Design B-4, B-5, and B-6. 6-6-6

Prerequisite: Arch. 303.

Required of seniors in Arch.

Advanced programs in architectural design. Registration with the Beaux Arts Institute of Design may be required. Complete presentation drawings of *projects* such as Class B—*Beaux Arts Institute Problems.*

Messrs. Williams, Baumgarten.

Arch. 401, 402, 403. Architectural Design A I, A-II, A-III. 6-6-6

Prerequisite: Arch. 355.

Required of fifth year in Arch.

Major problems in advanced planning and research. Registration with the Beaux Arts Institute of Design may be required. *Beaux Arts Institute Problems.*

Messrs. Shumaker, Williams, Baumgarten.

Arch. 407. Architectural Composition. 2-0-0

Prerequisite: Arch. 323.

Required of fifth year in Arch.

Principles of planning and composition as related to buildings; architectural motives, group planning; library research and sketches. Curtis: *Architectural Composition.* Messrs. Shumaker, Williams.

Arch. 408. Architectural Estimates. 0-0-2

Prerequisite: Arch. 305.

Required of fifth year in Arch.

Lectures and problems in taking off quantities and in estimating materials and labor cost in building construction. *Mimeographed Notes.*

Messrs. Shumaker, Williams.

Arch. 409. Building Materials I. 3-0-0

Prerequisite: Arch. 303.

Required of seniors in Arch. and Arch. Eng.

Nature and qualities of building materials, especially fabricated materials, and their use in interior and exterior finish and in construction. Sample exhibits, lectures and demonstrations. *Manufacturers' Data Sheets.*

Messrs. Williams, Grady.

Arch. 411, 412. Architectural Office Practice. 0-3-3

Prerequisite: Arch. 305.

Required of juniors in Arch., seniors in Arch. Eng.

The preparation of working drawings from sketches, following office routine. Knoblock: *Good Practice in Construction;* Ramsey and Sleeper: *Graphic Standards.* Mr. Baumgarten.

Arch. 414. Professional Practice. 0-0-1

Prerequisite: Econ. 307.

Required of fifth year in Arch.

Ethics and procedure in the profession of architecture. Relation of patron and commissionee. *Mimeographed Notes.* Mr. Shumaker.

Arch. 415. City Planning. 0-2-0

Prerequisite: Arch. 323.

Required in fifth year in Arch.

Origin and development of urban communities; aesthetic, economic, and circulatory problems in city and town planning; zoning and restraining legislation. Mr. Shumaker.

Arch. 416. Architectural Specifications. 0-0-3

Prerequisite: Econ. 307.

Required of seniors in Arch. and Arch. Eng.

Execution of specifications for architectural building contracts; identification of material, clarification of terms; protection of patron, contractor, and architect. *Mimeographed Notes.* Messrs. Shumaker, Williams.

Arch. 421. History of Architecture I. 0-3-0

Prerequisite: Arch. 323.

Required in fourth year in Arch.

Nineteenth century and contemporary architectural styles, with special attention to trends resulting from the use of modern materials; illustrated lectures, discussion assignments, and reports. Fletcher: *History of Architecture.* Mr. Shumaker.

Arch. 501, 502, 503. Graduate Design I, II, III. 4-4-4

Prerequisites: Arch. 323, 403 (or 352).

Class A. Project. Advanced problems in design. Archaeology. Measured Drawings. Registration with the Beaux Arts Institute of Design is required. *Beaux Arts Institute Problems.*

Messrs. Shumaker, Williams, Baumgarten, Grady.

Arch. 511, 512, 513. Historic Research I, II, III. 4-4-4

Prerequisites: Arch. 323, 403 (or 352).

Research in Architecture and Art in some important phase of its development. Library work with sketches. *Library References.*

Messrs. Paulson, Williams, Baumgarten, Grady.

BOTANY

Courses for Undergraduates

Bot. 101, 102. General Botany. 4-4-0

Required of freshmen and sophomores in Agriculture.

The first term: the nature of the higher crop type plants; the second: a survey of the major lower plant groups with the emphasis upon the economic forms, bacteria and fungi.

Messrs. Wells, Shunk, Anderson, Whitford, Buell.

Bot. 203. Systematic Botany. 0-0-3

Prerequisites: Bot. 101, 102.

Elective in Agriculture and Science.

An introduction to the local flora and the classification of the plants included therein. Messrs. Wells, Shunk, Whitford, Buell.

Bot. 211-213. Dendrology. 3-0-3

Prerequisites: Bot. 101, 102, 203.

Required of sophomores in Forestry.

The principal trees of North America. Mr. Buell.

Bot. 221. Plant Physiology. 5-0 0 or 0-0-5

Prerequisites: Bot. 101, 202.

Required of sophomores in Forestry.

The activities of living plants with special emphasis upon the fundamental principles concerned. Mr. Anderson.

Courses for Advanced Undergraduates

Bot. 301. Diseases of Field Crops. 3-0-0

Prerequisites: 101, 102.

Elective for juniors and seniors.

The more important diseases of field crops, such as cotton, tobacco, corn, small grains, legumes, and grasses; emphasis on symptoms, cause, and control. Mr. Lehman.

Bot. 303. Diseases of Fruit and Vegetable Crops. 0-0-3

Prerequisites: Bot. 101, 102, 221.

Elective for juniors and seniors.

Lectures and laboratory studies of importance, causes, symptoms, and control of diseases affecting these crops. Mr. Shaw.

Bot. 311. Diseases of Forest Trees. 3-0-0

Prerequisites: Bot. 101, 102, 221.

Required of seniors in Forestry.

Lectures and laboratory studies of importance, causes, symptoms, and control of diseases affecting trees and their products. Mr. Shaw.

Bot. 401. Advanced Plant Pathology. 5 or 5 or 5

Prerequisites: Bot. 101, 102, 221, 301 or 303.

Elective.

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.

Bot. 402. General Bacteriology. 0-4-0

Prerequisites: Bot: 101, 102, or Zool. 101.

Required of juniors or seniors in Agriculture.

An introduction to the principles of bacteriology; laboratory work on modern cultural methods of handling and studying bacteria. Mr. Shunk.

Bot. 411-412. Plant Morphology. 3-3-0

Prerequisites: Bot. 101, 102, 203.

Elective in Agriculture and Forestry.

An advanced survey of plants; the lower groups are given the first term, the higher (land plants) the second. Messrs. Wells, Shunk, Whitford.

Bot. 432. Advanced Plant Physiology. 0-3-0

Prerequisites: Bot. 101, 102, 221.

A critical and comprehensive treatment of the various aspects of plant physiology; particular attention given to basic principles and to recent developments. Mr. Anderson.

Bot. 441. Plant Ecology. 3-0-0

Prerequisites: Bot. 101, 102, 221.

Required of juniors in Forestry.

Environmental control of plant distribution with emphasis upon the habitats and vegetation of North Carolina. Mr. Wells.

Bot. 442. Microanalysis of Plant Tissue. 0-3-0

Prerequisites: Bot. 101, 102, 221.

The identification in plant tisues of mineral elements and organic conpounds and the physiological significance of these materials. Mr. Anderson.

Bot. 443. Soil Microbiology. 0-0-3

Prerequisites: Bot. 101, 102, 221, 402.

Elective in Agriculture and Forestry.

The more important microbiological processes that occur in soils: decomposition of organic materials, ammonification, nitrification, and nitrogen fixation. Mr. Shunk.

Bot. 451. Plant Microtechnique. 3-0-0

Prerequisites: Bot. 101, 102.

Elective in Agriculture and Forestry.

Materials and processes involved in the preparation of plant structures for microscopic examination. Mr. Anderson.

Bot. 452. Advanced Bacteriology. 0 3-0

Prerequisites: Bot. 101, 102, 221, 402.

Methods used in the bacteriological analysis of water and milk. Mr. Shunk.

Bot. 453. Advanced Plant Ecology. 0-0 3

Prerequisites: Bot. 221, 441.

Elective in Agriculture and Forestry.

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.

Bot. 462. Research Methods in Plant Physiology. 0-3-0

Experience in the use of techniques important in physiological research.

Bot. 463. Advanced Systematic Botany. 0-0-3

Prerequisites: Bot. 101, 102, 203.

A continuation of the elementary course 203 in the identification of the local flora plants together with a survey of the plant families from the modern phylogenetic point of view. Mr. Buell.

Bot. 473. Aquatic Biology. 0-0-2

Prerequisites: Bot. 101, 102.

Required of Sanitary Engineers.

Identification and control of the aquatic algae and protozoa which give trouble in reservoirs. A survey of the higher water and marsh plants is also included. Mr. Whitford.

Bot. 481, 482, 483. Pathogenic Fungi. 3-3 3

Prerequisites: Bot. 101, 102.

The structure, identification, and classification of fungi. Special attention is given to species parasitic on crop plants. Mr. Lehman.

Courses for Graduates Only

Bot. 501, 502, 503. Pathology of Special Crops. 3-3-3

Prerequisites: Bot. 301 or 401, 402.

A comprehensive study of the etiology, symptoms, and control of specific diseases. Messrs. Lehman or Shaw.

Bot. 511, 512, 513. Bacteriology: Special Studies. 3-3-3

Prerequisites: Bot. 402, 452.

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.

Bot. 521. Advanced Systematic Botany. 3-0-0 or 0-0-3

Prerequisites: Bot. 203.

An advanced survey of restricted groups of plants involving organization and distribution problems. Messrs. Wells, Buell.

Bot. 523. Cytogenetics. See F. C. 523.

Bot. 531, 532, 533. Plant Physiology. 3-3-3

Prerequisite: Bot. 221, 432.

Critical study of some particular problem, involving original investigation together with a survey of pertinent literature. Mr. Anderson.

Bot. 541. Plant Ecology. 3-0-0 or 0-0-3

Prerequisites: Bot. 203, 441.

Minor investigations in vegetation-habitat problems accompanied by advanced reference reading. Mr. Wells.

Bot. 551, 552, 553. Research in Botany. 3-3-3

Prerequisite: 30 hours in 100-300 courses in Botany. Staff.

Bot. 561, 562, 563. 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. 102. Ceramic Materials. 0-3-0

Prerequisite: Geol. 220.

Required of sophomores in Ceramic Engineering.

The origin and occurrence of ceramic raw materials, their chemical and physical properties and system of measuring these. Ries: *Clays Occurrence, Properties, and Uses.* Mr. Stone.

Cer. E. 103. Ceramic and Mining Processes. 0-0-3

Prerequisite: Geol. 220.

Required of sophomores in Cer. E. and Geol. E.

The winning and preparation of ceramic materials; the equipment and processes used in manufacturing ceramic products. Garve: *Factory Design and Equipment.* Mr. Greaves-Walker.

Courses for Advanced Undergraduates

Cer. E. 201. Drying Fundamentals and Practice. 3-0-0

Prerequisites: Phy. 203, Cer. E. 102.

Required of Juniors in Cer. E.

Theory and practice of drying ceramic products; problems. Greaves-Walker: *Drying Ceramic Products.* Mr. Greaves-Walker.

Cer. E. 203. Ceramic Products. 0-0-3

Prerequisite: Cer. E. 102.

Required of juniors in Cer. E.

Physical, chemical, and artistic requirement of ceramic products. Laboratory practice. Messrs. Greaves-Walker, Stone, Smith.

Cer. E. 252. Firing Fundamentals and Practice. 0-3-0

Prerequisites: Cer. E. 102 and 201.

Required of juniors in Cer. E.

The theory and practice of firing ceramic products. Problems. Wilson: *Ceramics; Clay Technology.* Mr. Greaves-Walker.

Cer. E. 253. Ceramic Calculations. 0-0-3

Prerequisites: Chem. 212, Cer. E. 102, 201, 252.

Required of juniors in Cer. E.

Solution of chemical and physical problems of the ceramic industries. Andrews: *Ceramic Tests and Calculations.* Mr. Stone.

Cer. E. 303. Silicates I. 3-0-0

Prerequisites: Chem. 331, Cer. E. 253 and Geol. 338.

Required of seniors in Cer. E.

The fundamental principles underlying the composition and production of whitewares, glazes, terra cotta, and abrasives. Hall and Insley: *A Compilation of Phase Rule Diagrams.* Mr. Stone.

Cer. E. 304. Silicates II. 0-3-0

Prerequisites: Chem. 331, Cer. E. 303 and Geol. 338.

Required of seniors in Cer. E.

The fundamental principles underlying the composition and production of refractories, cements, plasters, glasses, and metal enamels. Hall and Insley: *A Compilation of Phase Rule Diagrams;* Andrews: *Enamels;* Scholes: *Modern Glass Practice.* Mr. Stone.

Cer. E. 305. Pyrometry. 1-0-0

Prerequisite: Cer. E. 252.

Required of seniors in Cer. E.

The theory and use of temperature measuring instruments in industry. Wood and Cork: *Pyrometry.* Mr. Stone.

Cer. E. 311, 312, 313. Ceramic Laboratory. 3-3-3

Prerequisites: Cer. E. 201, 203, 252, 253, 304.

Required of seniors in Cer. E.

Advanced practice in producing and determining the chemical and physical properties of ceramic materials and products; thesis.

Messrs. Stone, Smith.

Cer. E. 314, 315. Ceramic Designing. 0-4-4

Prerequisites: M. E. 213, E. M. 322, Cer. E. 103, 201, 252, and 253.

Required of seniors in Cer. E.

Designing of ceramic equipment and structures. Garve: *Factory Design and Equipment.* Messrs. Greaves-Walker, Stone, Smith.

Courses for Graduates and Advanced Undergraduates

Cer. E. 403. Refractories. 0-0-3

Prerequisites: Chem. 331, Geol. 338, Cer. E. 102, 304.

Required of seniors in Cer. E.

Refractory materials and manufacture of refractory products; use of refractory products in industrial furnaces. Norton: *Refractories.*

Mr. Greaves-Walker.

Courses for Graduates Only

Cer. E. 501, 502, 503. Designing of Ceramic Equipment and Plants. 3-3 3

Prerequisite: Cer. E. 315.

Advanced study and designing of ceramic machinery, dryers, kilns, and plant structures. Mr. Greaves-Walker.

Cer. E. 505, 506, 507. Advanced Refractories and Furnaces. 3-3-3

Prerequisite: Cer. E. 313, 403.

Advanced study of refractory materials and products, and their use.

Mr. Greaves-Walker.

Cer. E. 509, 510, 511. Industrial Adaptability of Ceramic Materials. 3-3-3

Prerequisite: Cer. E. 313.

Laboratory investigations to determine the industrial uses to which various North Carolina ceramic materials can be put.

Messrs. Greaves-Walker, Stone.

Cer. E. 513, 514, 515. Ceramic Research. 3-3-3

Prerequisite: Cer. E. 313.

Research problems in ceramics will be assigned to meet the desire of the student for specialization. Messrs. Greaves-Walker, Stone.

Cer. E. 517, 518, 519. Glass Technology. 3-3-3

Prerequisites: Chem. 331, Geol. 338, Cer. E. 253, 304, 403.

Advanced study of the manufacture and physical properties of glass.

Mr. Greaves-Walker.

Cer. E. 521, 522, 523. Advanced Silicate Technology. 3-3-3

Prerequisites: Cer. E. 303, 304, 313.

Advanced laboratory practice in bodies, glazes, glasses, and colors.

Mr. Stone.

CHEMICAL ENGINEERING

Courses for Undergraduates

Chem. E. 201, 202, 203. Introduction to Chemical Engineering. 1-1-2

Prerequisites: Chem. 103; Math. 102.

Required of sophomores in Chem. E.

Reactions in chemical processes, illustrative problems, and control methods; elements of unit processes and unit operation; visits to chemical plants, elementary chemical engineering calculations. Randolph: *Introduction to Chemical Engineering.* Messrs. Randolph, Seely.

Chem. E. 212, 213. Chemical Nature of Engineering Materials. 0-3-3

Prerequisites: Chem. 103; Math. 103.

Required of seniors in General Engineering; elective for others.

Study of the fundamental facts about the chemical nature of engineering materials as an aid in the proper choice of materials for various engineering purposes under working conditions. Teachers' Manual. Mr. Randolph.

Courses for Advanced Undergraduates

Chem. E. 311, 312, 313. Chemical Engineering I. 3-3-3

Prerequisites: Chem. 213; Chem. E. 201 or Tex. 212.

Required of juniors in Chem. E. and elective for seniors in Textile Chemistry and Dyeing.

Unit processes, inorganic and organic technology; industrial chemistry; equipment, materials, methods, and processes employed in chemical manufacture; water, fuels, and power, studied on the quantitative and mathematical basis; conversion of raw materials into such necessary products, as sugar, paper, gas, paint, leather, glass; by-products and waste products. Read's *Industrial Chemistry;* Scroggins: *Organic Unit Processes;* Teachers' Manual; Badger and McCabe: *Elements of Chemical Engineering;* and *Library References.* Messrs. Lauer, Doody.

Chem. E. 321, 322, 323. Chemical Engineering Laboratory I. 1-1-1

Prerequisite or concurrent: Chem. E. 311.

Required of juniors in Chem. E.

A laboratory study of industrial control methods; visits to industrial plant; problems and processes solved and presented in technical reports; preparation of products on pilot plant scale; cost studies. *Notes.*

Messrs. Lauer, Doody, Dickinson.

Chem. E. 330. Treatment of Water and Sewage. 3-0-0 or 0-0-3

Prerequisite: Chem. E. 311 or C. E. 215.

Required of juniors in San. E.

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. *Notes.* Messrs. Randolph, Doody.

Chem. E. 331. Industrial Stoichiometry. 3-0-0 or 0-3-0 or 0 0-3

Prerequisite or concurrent: Chem. E. 311.

Required of juniors in Chemical Engineering.

Industrial calculations and measurements; heat balances; material balances; fuels and combustion processes; principles of chemical engineering calculations. Haugen and Watson: *Industrial Chemical Calculations.*

Mr. Van Note.

Courses for Graduates and Advanced Undergraduates

Chem. E. s401. Pilot Plant Practice. 3 credits

Prerequisites: Chem. E. 313, Chem. E. 323, Chem. 213.

Required of Junior Chemical Engineering students and elective for others. To be given during two weeks immediately preceding the opening of the fall term in September.

Practical application of chemical machinery and chemical testing methods. Pilot plant examination of chemical processes. Cost estimation and process development through pilot plant studies. Reference: current technical journals, lectures and notes. Messrs. Lauer, Doody, Randolph.

Chem. E. 411, 412, 413. Principles of Chemical Engineering. 3-3-3

Prerequisite: Chem. E. 311; concurrent with Chem. 431.

Required of seniors in Chem. E.

Survey of field of Chemical Engineering; control in industrial manufacture; unit operations; flow of fluids and of heat; equipment for and principles involved in such operations as crushing and grinding, separation, evaporation, distillation, filtration, humidification, drying, absorption, and extraction; chemical engineering calculations; design and efficiency of chemical machinery. Walker, Lewis, McAdams, and Gilliland: *Principles of Chemical Engineering;* Badger and McCabe: *Elements of Chemical Engineering.* Messrs. Bain, Doody, Seely.

Chem. E. 421. Water Treatment 3-0-0 or 0-3-0 or 0-0-3

Prerequisite: Chem. E. 311.

Required of seniors in Chem. E.

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. *Notes.*

Messrs. Randolph, Doody, Dickinson.

Chem. E. 422. Chemistry of Engineering Materials. 3 or 3 or 3

Prerequisite: Chem. E. 311.

Required of seniors in Chem. E.

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 examinations of metals and alloys, and other materials; fire assaying. Leighou: *Chemistry of Engineering Materials;* White: *Engineering Materials.*

Messrs. Randolph, Van Note, Bain.

Chem. E. 423. Electrochemical Engineering. 3-3-3 or 0-0-3

Prerequisite: Chem. E. 311.

Required of seniors in Chem. E.

Theory and practice of electrochemical industries; principles of electrolysis and other electrochemical processes; electric furnace; electrothermal operations, electrometallurgy. Mantell: *Industrial Electrochemistry.*

Messrs. Randolph, Doody, Lauer.

Chem. E. 425. Gas Engineering. 3 or 3 or 3

Prerequisite: Chem. E. 311.

Elective for seniors or graduates in Chem. E.

A gas engineering course: manufacture of industrial fuel gases and their distribution; advances made in the industry; apparatus and equipment; plant design; 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. 426. Sanitation Processes. 0-0-3

Prerequisite: Chem. E. 311.

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. *Notes.*

Messrs. Randolph, Lauer.

Chem. E. 427. Industrial Application of Physical Chemistry. 3 or 3 or 3

Prerequisite: Chem. E. 311.

Special phases of physical chemistry studied technically with reference to the practical application of these principles in the chemical industries such as industrial catalysis, evaporation principles, absorption, equilibrium, applications of phase rule, physical metallurgy, colloids. *Notes.* Mr. Doody.

Chem. E. 428. Fuel and Combustion Engineering. 3 or 3 or 3

Prerequisite: Chem. E. 311.

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. Haslam and Russell: *Fuels and Their Combustion.*

Messrs. Lauer, Van Note.

Chem. E. 431, 432, 433. Chemical Engineering Laboratory and Design II. 2-2-2

Prerequisite or concurrent: Chem. E. 411.

Required of seniors in Chem. E.

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. Messrs. Bain, Seely.

Chem. E. 434. Chemical Engineering Design. 3 or 3 or 3

Prerequisite or concurrent: Chem. E. 411.

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. *Notes.*
Messrs. Bain, Seely.

Chem. E. 435. Industrial Oil, Fats and Waxes. 0-0-3 or 3-0-0

Prerequisite: Chem. E. 311.

Elective for juniors or seniors in Chem. E.

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; petroleum engineering. Mr. Lauer.

Chem. E. 436. Chemical Engineering Thermodynamics. 3 or 3 or 3

Prerequisite or concurrent: Chem. E. 411.

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. Doody.

Chem. E. 437. Cellulose and Allied Industries. 3-3-0 or 3-3-3

Prerequisite or concurrent: Chem. E. 311 or Forestry 206, 207.

Elective.

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. *Notes.*
Messrs. Lauer and Randolph.

Chem. E. 438. Corrosion: Causes and Prevention. 3-3 3

Prerequisite: Chem. E. 311.

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. Speller: *Corrosion: Causes and Prevention. Notes.*

Mr. Van Note.

Chem. E. 439. Chemical Principles. 3 or 3 or 3

Prerequisite or concurrent: Chem. E. 311.

Fundamental principles in chemical manufacture and correlation of these principles in unit processes and operation. Hougen and Watson: *Industrial Chemical Calculations. Notes.* Mr. Doody.

Chem. E. 440. Metals and Alloys. 3 or 3 or 3

Prerequisite: Chem. E. 311 and 422 or M. E. 131.

Elective for seniors or graduates.

Metals and alloys studied through chemical, thermal, and microscopic analysis; intermetallic compounds, solid solutions, eutectics; internal mechanisms and their effect in aging, heat treating, mechanical working; modern physical metallurgical problems and practices. Doan: *Principles of Physical Metallurgy;* Williams and Homerberg: *Principles of Metallography.*

Messrs. Bain, Van Note.

Courses for Graduates Only

Chem. E. 501. Chemical Technology Advanced. 3-3 3

Prerequisite: Chem. E. 411.

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. Messrs. Randolph, Lauer.

Chem. E. 502. Industrial Chemical Research. 3-3-3

Prerequisite: Chem. E. 411.

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. 503. Chemical Engineering Research. 3-3-3

Prerequisite: Chem. E. 411.

Some plant problem studied exhaustively by making investigations at the chemical plant, and by supplementary experiments and research in the laboratory; measurements, tabulation, graphs, calculation of some actual plant problem, and Pilot plant research problems. Staff.

Chem. E. 504. Advanced Chemical Engineering. 3-3-3

Prerequisites: Chem. E. 411, Chem. E. 431.

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; interrelations between heat transfer and fluid friction. McAdam: *Heat Transmission* and other texts.
Staff.

CHEMISTRY

Courses for Undergraduates

Chem. 101, 102, 103. General Inorganic Chemistry. 4 4-4

Recitations and laboratory work; theories of laws, history, occurrence, preparation, properties, and uses of the more important elements and their compounds; formulae, valence, equations and calculations.
Messrs. Caveness, Reid, Jones, Jordan, Satterfield, Showalter, Loeppert, White, Wilson.

Chem. 211. Qualitative Analysis. 4-0-0

Prerequisites: Chem. 101, 102, 103.

Required of sophomores in Ceramic, Chemical, and Mining Engineering and those majoring in chemistry and of juniors in Textile Chemistry and Dyeing.

Identification and separation of more common ions and analysis of mixture of salts of commercial products.
Messrs. Wilson, Reid, Jones, Loeppert.

Chem. 212. Quantitative Analysis. 0-4-0

Prerequisite: Chem. 211.

Required of sophomores in Ceramic Engineering, Chemistry, Chemical Engineering, and of juniors in Textile Chemistry and Dyeing.

Volumetric Analysis: Alkalinity, acidimetry, oxidation, and iodometric titrations. Messrs. Wilson, Reid, Jones Loeppert.

Chem. 213. Quantitative Analysis. 0-0-4

Prerequisite: Chem. 211.

Required of sophomores in Chemical Engineering.

A continuation of Chem. 212. Gravimetric methods. Substances of more difficult nature are analyzed, as minerals, steel, alloys, limestone, Paris green, etc. Messrs. Wilson, Reid, Jones, Loeppert.

Chem. 221. Introduction to Organic Chemistry. 4-0-0 or 0-4-0 or 0-0-4

Prerequisites: Chem. 101, 102, 103.

Required of sophomores in Agriculture. Elective for others.

Hydrocarbons, alcohols, aldehydes, ketones, acids, ethers, esters, amino-acids, and bezine derivatives; carbohydrates, fats, proteins, and related compounds. Mr. Reid.

Chem. 223. 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. Messrs. Wilson, Reid, Jones, Loeppert.

Chem. 233. Quantitative Analysis. 0-0-4

Continuation of Course 212, along with gravimetric methods used in the analysis of magnesium, phosphate rock, fertilizer and insecticide. Messrs. Wilson, Reid, Jones, Loeppert.

Chem. 242. Chemical Calculations. 0-3-0 or 0 0-3

Prerequisites: Chem. 101, 102, 103.

Chemical problems, especially in analytical work; lectures on principles, theories, laws, upon which the problems are based; assigned problems for discussion. Mr. Jones.

Chem. 331. Physical Chemistry. 5-0-0

Prerequisites: Chem. 101, 102, 103.

Required of Cer. E.; elective to others.

Fundamental chemical principles from a physiochemical viewpoint; special attention to silicate analysis, colloids, and phase rule. Mr. Sutton.

Courses for Graduates and Advanced Undergraduates

Chem. 401. Historical Chemistry. 2-0-0

Prerequisites: Chem. 101, 102, 103.

Development of Chemistry and the history of men instrumental in the progress of Chemistry. Mr. Williams.

Chem. 402, 403. Theoretical Chemistry. 0-2-2

Prerequisites: Chem. 101, 102, 103.

Atoms and molecules; chemical reactions and conditions influencing them; electronic conception of valence, radio activity. Mr. Jordan.

Chem. 411. Advanced Qualitative Analysis. 4-0-0

Prerequisite: Chem. 211 or its equivalent.

Lectures and laboratory work dealing with the analysis of alloys and complex mixture. Mr. Wilson.

Chem. 412. 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, complete analysis of ores, special steels, paint pigments and alloys. Mr. Wilson.

Chem. 421, 422, 423. Organic Chemistry. 4-4-4

Prerequisites: Chem. 101, 102, 103.

Required of juniors in Chemical Engineering, Chemistry, and seniors in Textile Chemistry and Dyeing. Elective for others.

Aliphatic and aromatic compounds; practical applications; methods of preparation and purification of compounds, and their structures.
Mr. Williams.

Chem. 424. The Chemistry of Hydrocarbons and Their Derivatives. 0-3-0 or 0-0-3

Prerequisites: Chem. 421, 422, 423.

New developments in solvents, resins, detergents, synthetic rubber, motor fuels. Mr. Reid.

Chem. 431, 432, 433. Physical Chemistry. 4-4 4 or 4-4 0

Prerequisite: Chem. 213.

The first two terms only required of Chemical Engineers; elective for Agricultural Chemistry students.

Principles of Physical Chemistry; laws and theories, application to various branches of chemistry and to industrial processes. Mr. Sutton.

Chem. 441. Food Products and Adulterants. 3-0-0 or 0 3-0

Prerequisites: Chem. 221 or 421, 422, 423.

Designed for students in all schools.

Food principles; cereals, starches, sugars, fats; milk and milk products; the packing house; food preservation; beverages, spices and condiments; food legislation; food advertising. Mr. Satterfield.

Chem. 442. Chemistry of Colloids. 0-3-0

Prerequisites: Chem. 221 or 421, 422, 423.

Colloidal behavior, osmotic pressures, dialysis, sols and gels, membranes and membrane equilibria, proteins, and Donnan equilibrium. Mr. Jones.

Chem. 451, 452. Physiological Chemistry. 3-3-0

Prerequisites: Chem. 221 or 421, 422, 423.

Essential chemical facts pertaining to life processes; digestion, absorption, metabolism, secretions, and excretions; lectures, laboratory.
Mr. Satterfield.

Chem. 462. Chemistry of Vitamins. 0-3 0 or 0-0-3

Prerequisites: Chem. 221 or 421, 422, 423.

Required of juniors in Animal Prod.

Application of vitamin hypothesis to human nutrition; history, nomenclature, properties, distribution, effects of deficiencies, vitamin values.
Mr. Satterfield.

Chem. 472. Blood Analysis. 0-3 0 or 0-0 3

Prerequisites: Chem. 212 and 421, 422, 423.

Hemoglobin, sugar, urea, uric acid, cholesterol, creatine, creatinine, non-protein, nitrogen, amino-acid nitrogen, calcium. Folin-Wu system is emphasized; lectures and laboratory. Mr. Satterfield.

Chem. 481. Agricultural Chemistry. 3-0-0

Prerequisites: Chem. 101, 102, 103, and 221 or 421, 422, 423.

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.

Chem. 482, 483. Food and Nutrition. 0-3-3

Prerequisites: Chem. 221 or 421, 422, 423.

Open to all students desiring a practical knowledge of the subject.

Carbohydrates, fats, proteins, amino-acids, minerals, fiber, vitamins, enzymes; nutritive value of food materials; digestion, food idiosyncrasy; acidosis and alkalosis. Mr. Satterfield.

Chem. 491, 492, 493. Advanced Physical Chemistry. 3-3-3

Prerequisites: Chem. 431, 432, 433.

An advanced problem course designed for chemical engineers. Mr. Sutton.

Courses for Graduates Only

Chem. 501, 502, 503. Organic Chemistry, Advanced. 3-3-3

Prerequisites: Chem. 421, 422, 423.

Principles of organic chemistry; current literature; laboratory work and preparation in quantity. Mr. Williams.

Chem. 511. Organic Qualitative Analysis. 3-0-0

Prerequisites: Chem. 421, 422, 423.

Detection of elements and radicals, group characteristics. Mr. Williams.

Chem. 512. Organic Quantitative Analysis. 0-3-0

Prerequisites: Chem. 212, 421, 422, 423.

Analysis of organic compounds for carbon, hydrogen, nitrogen, the halogens, sulfur. Mr. Williams.

Chem. 513. Micro-Analysis. 0-0-3

Prerequisites: Chem. 421, 422, 423.

Tests for compounds, and impurities in quantities too small to be detected by ordinary methods. Mr. Williams.

Chem. 523. Micro-Chemical Analysis. 0-0-3

Prerequisite: Chem. 213.

Inorganic micro qualitative analysis; fibres, starches, etc. Mr. Wilson.

Chem. 531, 532, 533. Chemical Research. 3 3-3

Prerequisite: 54 term credits in Chemistry. Open to all graduates.

Special problems that will furnish material for a thesis. Staff.

Chem. 541, 542, 543. Seminar. 1-1-1

Required of graduate students specializing in Chemistry.

Preparation and presentation of abstracts of current publications in the field of Chemistry.

Chem. 552, 553. Biochemistry. 0-3-3

Prerequisites: Chem. 421, 422, 423, 482, 483.

Special topics in Biochemistry. Mr. Satterfield.

CIVIL ENGINEERING

Courses for Undergraduates

C. E. 101, 102, 103. Drawing. 1-1-1

Required for 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. Sloane and Montz: *Elementary Topographic Drawing.* Messrs. Fontaine, Lambe.

C. E. s200. Surveying.* 3 credits

Prerequisite: Math. 102.

Required in the summer immediately following the freshman year in Aero. E., 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. Tracy: *Plane Surveying.* Staff.

* Note.—Two sessions: (a) Full time, 3 weeks immediately following close of College third term; (b) half time, 6 weeks concurrently with College Summer School term in order to allow students to schedule summer school work.

C. E. 221, 222, 223. Surveying, Theoretical. 3-3-3

Prerequisite: Math. 102.

Required of all sophomores in Civil Engineering. C. E. 221, 222 required in Forestry (0-3-3), in Geol. Eng. and Landscape Architecture (3-3-0).

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. Davis and Foote: *Surveying*. Rubey: *Route Surveys*. Staff.

C. E. 224. Topographic Drawing. 0-0-1

Prerequisites: C. E. 101, 102, 103.

Required in Forestry, Landscape Architecture.

Plotting by coördinates; contours and general topography. *Notes*. Staff.

C. E. 225, 227. Field Surveying. 1 0-1

To be taken concurrently with C. E. 221, 223.

Required of all sophomores in Civil Engineering and Landscape Architecture. C. E. 225 required in Geol. E. (1-0-0), and in Forestry (0-1-0).

Surveying field practice, topographical surveys, railroad and highway curves. Profiles, cross-sections. Staff.

C. E. 226. Mapping. 0-1-0

Prerequisites: M. E. 105, 106. To be taken concurrently with C. E. 222.

Required of all students in Civil Engineering, Geological Engineering, and Landscape Architecture.

Practice in conventional signs and lettering. A complete topographical map and tracing is to be made involving the use of three methods of contour location. Field notes to be furnished. Messrs. Fontaine, Lambe.

C. E. 281. Mill and Mill Village Sanitation. 3-0-0

Prerequisite: Chem. 103.

Mill and mill village water supply and sewage disposal, mosquito and fly control, sanitary milk supply, industrial hygiene. Course for textile students. Ehlers and Steele: *Municipal and Rural Sanitation*. Mr. Pearce.

Courses for Advanced Undergraduates

C. E. s300. Surveying and Mapping. 3 credits

Prerequisites: C. E. 221, 222; C. E. 224.

Required in summer immediately following sophomore year in Forestry.

Boundary; topographical surveys, and calculations of sections of College Experimental Forestry Lands. Finished section maps. Davis and Foote: *Surveying.* Staff.

C. E. s310. Advanced Surveying.* 3 credits

Prerequisites: C. E. 221, 222, 223; C. E. 226.

Required in the summer immediately following the sophomore year in Civil Engineering and Landscape Architecture.

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. Topograph, details, special problems. Davis and Foote: *Surveying.* Staff.

C. E. 321. Materials of Construction. 3 or 3 or 3

Prerequisite: Junior standing.

Required of all juniors in Civil Engineering, M. E., Aero. E. and A. E., and of seniors in I. 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. Tucker: *Laboratory Manual in the Testing of Materials.* Mills: *Materials of Construction.* Messrs. Fontaine, Babcock.

C. E. 361, 362, 363. Construction Engineering I. 3-3-3

Prerequisite: E. M. 311.

Required of juniors in Constr. E.

Study of working drawings, good practice in masonry and frame construction, estimating quantities. Huntington: *Building Construction; Notes and Trade Literature.* Mr. Bramer.

* Note.—Two sessions: (a) Full time, 3 weeks immediately following close of College third term; (b) half time, 6 weeks concurrently with College Summer School term in order to allow students to schedule summer school work.

C. E. 365, 366. Sanitary and Mechanical Equipment of Buildings. 3-3-0

Prerequisites: E. M. 311, 312.

First term required of juniors in Constr. E. First and second terms required of juniors in Arch. E.

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. Gay and Fawcett: *Mechanical and Electrical Equipment of Buildings.* Mr. Pearce.

C. E. 383. Sanitary Engineering. 0-0-3

Prerequisite: Chem. 103.

Required of juniors in San. E.

Water supply and sewage disposal; ventilation; mosquito and fly control; refuse disposal; public health laws and organization. Ehlers and Steele: *Municipal and Rural Sanitation.* Mr. Pearce.

Courses for Graduates and Advanced Undergraduates

C. E. 421, 422. Reinforced Concrete. 3-3-0

Prerequisites: E. M. 313, 322.

Required of all seniors in Civil Engineering and Architectural Engineering.

Derivation of formulas used in reinforced concrete design, use of diagrams and curves. Illustrative problems in design. Turneaure and Maurer: *Principles of Reinforced Concrete Construction.* Messrs. Mann, Bramer.

C. E. 423, 424, 425. Graphic Statics. 1-1-1

Prerequisite: E. M. 313.

First term required of all seniors in Civil Engineering. First, second, and third terms required of all seniors in Architectural Engineering.

Principles involved in the solution of problems by graphical methods. Moments, shears. Resultant pressure on retaining walls. Stress diagrams. Fairman and Cutshall: *Graphic Statics* and assigned references. Mr. Mann.

C. E. 426, 427. Structural Design. 0-3 3

Prerequisites: E. M. 322, C. E. 431.

Required of all seniors in Civil Engineering and Architectural Engineering.

Design of beams, columns, tension members, plate girders, trusses and structures. Bishop: *Structural Design.* Mr. Mann.

C. E. 431, 432. Theory of Structures. 3-3-0

Prerequisite: E. M. 322.

Required of all seniors in Civil Engineering.

Roof trusses; bridge trusses; three hinged arch, lateral bracing and portals; rigid frame, wind stresses in tall buildings, indeterminate trusses, secondary stresses. Spofford: *Theory of Structures.* Mr. Bramer.

C. E. 431a, 432a. Theory of Structures (abridged). 3-3-0

Prerequisite: E. M. 322.

Required in Architectural Engineering, C. E. 431, 432, to be required if less than five students enroll for C. E. 431a, 432a.

Stress analyses and designs of wooden and steel roof trusses; wood, steel, and reinforced concrete floor systems. Theory and design of columns, footings, retaining walls. Theories for wind stress design in tall buildings. Shedd and Vawter: *Theory of Simple Structures.* Mr. Bramer.

C. E. 435. Soil Mechanics. 3-0-0

Prerequisites: E. M. 321, 322.

Required of all seniors in Civil Engineering.

The classification of soils, their physical characteristics and tests; the suitability of certain types of soils for foundations; methods of stabilizing soils; general principles involved in selection of soils for foundations.
Mr. Babcock.

C. E. 438, 439. Elements of Structures. 0-3-3

Prerequisite: E. M. 322.

Required of seniors in General Engineering, elective for others.

Stress analyses and designs of footings, columns, beams, floor systems, and roof trusses; estimating quantities and costs of comparative designs. Lectures Notes. Spofford: *Elements of Structures.* Mr. Bramer.

C. E. 442. Railroad Economics. 0-3 0

Prerequisites: C. E. 223, E. M. 311.

Required of seniors in General Civil Engineering.

Economics of railroad location; construction, maintenance and operation; betterment and valuation surveys. Raymond: *Elements of Railroad Engineering.* Mr. Mann.

C. E. 143. Hydraulic Structures. 0 0 3

Prerequisite: E. M. 330.

Required of juniors in General Civil Engineering, Highway Engineering and Sanitary Engineering.

Application of the fundamentals of Fluid Mechanics to problems in Hydraulic Engineering; flow in pipes, in canals and natural water courses; design of locks and dams for navigation; flood control and power development; theory of design, installation and operation of pumps and hydraulic motors. Mr. Riddick.

C. E. 449. Hydrology. 0 0-3

Prerequisite: E. M. 330.

Elective for seniors in Engineering.

The study of the science of the occurrence, distribution and use of water upon the earth with particular reference to North Carolina, including precipitation, evaporation, transpiration, seepage, runoff and stream flow. Myer: *Elements of Hydrology.* Mr. Van Leer.

C. E. 453. Applied Astronomy. 0-0 4

Prerequisite: C. E. 310.

Required of seniors in General Civil Engineering and Highway Engineering.

The application of astronomy in determining latitude, azimuth, longi tude and time; astronomical observations with transit and sextant; reduction of observations. One credit given for observations. Hosmer: *Applied Astronomy.* Mr. Babcock.

C. E. 461, 462, 463. Construction Engineering II. 3-3-3

Prerequisites: C. E. 361, 362, 363.

Required of seniors in Constr. E.

Study of construction of reinforced concrete and steel-framed structures; estimation, cost analysis, organization, management of construction plants, field methods, proposals and contracts. Huntington: *Building Construction; Notes and Trade Literature.* Mr. Bramer.

C. E. 467. Specifications. 0 0-3

Prerequisite: C. E. 321.

Required of seniors in Constr. E. and Arch. E.

Preparation of specifications and legal documents for building operations. Kirby: *Elements of Specification Writing.* Mr. Pearce.

C. E. 469. **Construction Methods.** 0-0-3

Prerequisites: C. E. 361, 362, 363.

Required of seniors in Construction Engineering.

A study of organization, equipment, plant layout, work sequences, progress analyses, and safety methods applicable to construction work.

Mr. Bramer.

C. E. 473. **Aerial Surveying.** 0-0-3

Prerequisite: C. E. s310.

Elective for juniors and seniors in Engineering.

A study of various methods of constructing topographical maps from horizontal, vertical, and oblique photographs, and different methods of control of Aerial Surveys. The work covered is confined to the methods of producing maps from photographs and does not take up the technical work of photography or piloting. This course will be given only to an enrollment of six students or more. Breed and Hosmer: *Higher Surveying.*

Mr. Babcock.

C. E. 481, 482. **Sanitary Engineering Laboratory.** 1-1-0

Concurrent with C. E. 485, 486.

Required of seniors in General 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. *Notes.* Mr. Pearce.

C. E. 483. **Financing of Sanitary Utilities.** 0-0-3

Prerequisites: Math. 303, C. E. 383.

Required of seniors in Sanitary Engineering.

Rates and service charges, collections, operating cost control, bond issues, and budgets. Mr. Pearce.

C. E. 485. **Waterworks.** 3 0 0

Prerequisite: E. M. 330.

Required of seniors in General Civil Engineering and Sanitary Engineering.

Municipal waterworks; quantity; sources of supply; collection; purification; distribution. Babbitt and Doland: *Water Supply Engineering.*

Mr. Pearce.

C. E. 486. Sewerage. 0-3-0

Prerequisite: E. M. 330.

Required of seniors in General Civil Engineering and Sanitary Engineering.

Separate and combined sewer system; principles of design and construction; sewer appurtenances; disposal plants. Metcalf and Eddy: *Sewerage and Sewage Disposal.* Mr. Pearce.

C. E. 488. Water Purification. 0-3-0

Prerequisites: E. M. 330, C. E. 485.

Required of seniors in San. E.

Design and operation of water purification plants; sedimentation, coagulation, filtration, and sterilization of water. Recent treatment processes. Inspection trips to various plants. Babbitt and Doland: *Water Supply Engineering.* Mr. Pearce.

C. E. 489. Sewage Disposal. 0-0-3

Prerequisite: C. E. 486.

Required of seniors in San. E.

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. Metcalf and Eddy: *Sewerage and Sewage Disposal.* Mr. Pearce.

Courses for Graduates Only

C. E. 525, 526, 527. Advanced Structural Design. 3-3 3

Prerequisites: C. E. 426, 427.

Analysis and design of fixed, hinged and multispan arches. Complete designs of steel and reinforced concrete structures. MacCullough and Thayer: *Elastic Arch Bridges.* Mr. Bramer.

C. E. 531, 532, 533. Advanced Structural Theory. 3 3 3

Prerequisites: C. E. 431, 432.

Stress analysis in continuous frames and arches; secondary stresses; wind stresses and space frame-work. Analyses by use of Beggs' Deformeter. Sutherland and Bowman: *Advanced Structural Theory.* Mr. Bramer.

C. E. 561, 562, 563. Construction Engineering Research. 3 3-3

Prerequisites: C. E. 461, 462, 463.

Study of recent advancement and developments in Construction. Original research. Mr. Bramer.

C. E. 581, 582, 583. Sanitary Engineering Research. 3-3-3

Prerequisites: C. E. 383, 488, 489.

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 are compiled from literature. In the third term, individual research is done. Mr. Pearce.

C. E. 585, 586. Advanced Sewage Disposal. 3-3 0

Prerequisite: C. E. 489.

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. Pearce.

C. E. 588, 589. Advanced Water Purification. 0-3-3

Prerequisite: C. E. 488.

Study of water purification processes, primary and secondary treatments, control of tastes and odors, and treatment of colored waters. Mr. Pearce.

ECONOMICS

Courses

Econ. 201, 202, 203. 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. Arrington, Brown, Green, Leager, Moen, Shulenberger, and Wood.

Econ. 205. Introduction to Economics. 3 0-0 or 0-3-0 or 0-0-3

Required of students in Forestry, Land. Arch., and Ind. Arts.

The business aspects and economic organization of society; production, distribution, and value of economic goods. Mr. Green.

Econ. 212. Accounting for Engineers. 3 0-0 or 0-3-0

A survey of accounting principles; financial statements, their construction, use, and interpretation. Mr. Shulenberger.

Econ. 301, 302, 303. Principles of Accounting. 3-3-3

Required of juniors in Agricultural Economics, Industrial Engineering, Textile Manufacturing, and Yarn Manufacturing.

Fundamental principles of theory and practice; interpretation of the structure, form, and use of business statements. Mr. Shulenberger.

Econ. 305. Business Organization. 0-3-0

Prerequisites: Econ. 201, 202, 203 or 205.

Required of seniors in Highway Engineering.

Forms of business enterprises; single enterprises. partnerships, joint-stock companies and corporations; principles of business management.

Mr. Green.

Econ. 307. Business Law. 3-0-0 or 0-3-0 or 0-0-3

Prerequisite: Junior standing.

Required of seniors in Engineering.

Sources of law; fields of law; contracts, agency, sales; negotiable documents; the law as it controls business transactions.

Messrs. Green and McMillan.

Econ. 308. Advanced Business Law. 0-0-3

Prerequisite: Econ. 307.

A continuation of Economics 307, including bailments, suretyship, real property; corporations; recent developments in State and Federal Law.

Mr. Green.

Econ. 311, 312. 313. Marketing Methods and Sales Management. 3 3-3

Prerequisites: Econ. 201, 202, 203 or 205.

Marketing functions, agencies, systems; retailing; marketing analysis; problems in marketing; elements of sales management. Mr. Moen.

Econ. 315. Advertising. 3-0-0

Prerequisites: Econ. 201, 202, 203.

Principles of advertising. Mr. Moen.

Econ. 318. Money and Credit. 3-0-0

Prerequisites: Econ. 201, 202, 203 or 205.

The functions, history, and development of money and credit; contemporary policies and relation to prices; interrelations of money and credit in banks and financial institutions. Mr. Moen.

Econ. 319. Modern Banking. 0-3-0

Prerequisites: Econ. 201, 202, 203 or 205.

Origin and development of banking in the United States; functions and operations of the modern bank; banking laws; Federal Reserve System. Mr. Moen.

Econ. 320. Corporation Finance. 0-0-3

Prerequisites: Econ. 201, 202, 203.

Raising and spending of funds and standards of control. Mr. Moen.

Econ. 325, 326. Industrial Management. 3-3-0

Prerequisites: Econ. 201, 202, 203.

Required of seniors in Textile Engineering; elective for all others.

Principles and techniques of modern scientific management; relationship of finance, marketing, industrial relations, accounting, and statistics to production; techniques regarding specific problems; analysis of economic, political, and social influences on production. Mr. Wood.

Econ. 331. Labor Problems. 3-0-0

Prerequisites: Econ. 201, 202, 203 or 205.

An economic approach to labor problems, including such topics as insecurity, wages, hours, working conditions, substandard workers, legislation aimed at correcting existing evils. Mr. Wood.

Econ. 332. Industrial Relations. 0-3-0

Prerequisites: Econ. 201, 202, 203.

History, organization, activities, and policies of organized labor; legal aspects, recent developments. Mr. Wood.

Econ. 333. Personnel Management. 3-0-0 or 0 3 0 or 0-0-3

Prerequisites: Econ. 201, 202, 203 or 205.

Required of Textile seniors; elective for all others.

Emphasis on the human problems of industry. A review of the scientific techniques and results of research regarding the problems of employment; training, promotion, transfer; health and safety; service and welfare; and joint relations. Mr. Wood.

Econ. 335. Time Study. 0-3-0

Prerequisites: Econ. 201, 202, 203.

Analysis of shop operation into elements, and the determination of the time for each element; emphasis on factors affecting job specification, and wage rate setting. Mr. Wood.

Econ. 340. Transportation Problems. 0-0-3

Prerequisites: Econ. 201, 202, 203.

The economic aspects of transportation facilities provided by the railroads, highways, and air- and water-transportation agencies; principles and problems of rate making, operation, management, valuation, coördination and government regulation. Mr. ___ .

Econ. 401. Advanced Accounting. 3-0-0

Prerequisites: Econ. 301, 302, 303.

Problems of asset valuation, such as depreciation, replacements, amortization, etc., found in all types of business organizations. Mr. Shulenberger.

Econ. 404, 405. Principles of Cost Accounting. 0-3-3

Prerequisites: Econ. 301, 302, 303.

Cost finding, material costs, labor costs, overhead costs, etc.
Mr. Shulenberger.

Econ. 408. Survey of Statistical Methods. 3-0-0 or 0-3-0

Prerequisites: Econ. 201, 202, 203 or 205.

Required of juniors in Forestry and Agricultural Economics.

Elective for all others.

Methods of describing quantitative data; collection and methods of analysis of statistical materials; charts and graphs for presenting numerical facts. Mr. Leager.

Econ. 409. Statistical Technique. 0-3-0

Prerequisite: Econ. 408.

Required of juniors in Agricultural Economics.

The problem of estimation, correlation; simple linear and nonlinear forms; normal curve and probable error; methods of sampling.

Mr. Leager.

Econ. 414. International Economic Relations.

Prerequisites: Econ. 201, 202, 203 or 205.

Backgrounds and some newer developments in international economics, with special emphasis on the position of the United States in world trade.

Mr. Green.

Econ. 415. Investment Problems and Policies. 0-3-0

Prerequisites: Econ. 201, 202, 203 or 205.

Different types of investments and methods of judging them. Managing personal finances. Mr. Moen.

Econ. 416. Public Finance and Taxation. 0-3-0

Prerequisites: Econ. 201, 202, 203.

Classes of income and expenditure; incidence of different classes of taxes.

Mr. Moen.

Econ. 418. Principles of Insurance. 0 0-3

Prerequisites: Econ. 201, 202, 203.

Elective.

Risk as an element of all agricultural and industrial activity; discussion of such risks as can be covered by insurance with the appropriate form of insurance, e.g., employer's liability, workmen's compensation, fire, life, and other forms. Mr. Shulenberger.

Econ. 501. Advanced Economic Theory. 3 3-0

Prerequisite: Eighteen (18) term credits in Economics.

Recent and current economic theory; principal schools of economists; theory of prices under the system of free enterprise. Mr. .

Econ. 502. History of Economic Doctrines. 0 0-3

Prerequisite: Econ. 501.

History of economic doctrines from the Mercantilists to the period of Ricardo. Mr. .

EDUCATION: TEACHER EDUCATION

AGRICULTURAL EDUCATION

Ed. 308. Visual Aids. 0-0-3

Prerequisite: Junior standing.

Required of students in Education.

Methods and technique of visual instruction; lettering; statistical illustrating; chart, graph, and poster-making; photography; projector operation, care, and use. Designed for teachers and extension workers.

Mr. Armstrong.

Courses for Graduates and Advanced Undergraduates

Ed. 406. Principles of Teaching. 3-0-0

Prerequisites: Ed. 303, 304.

Required of seniors in Agr. Ed.

Principles of teaching with applications to vocational agriculture; personal requisites of a teacher; responsibilities; objectives of teaching; school control; motivation; directing study. Mr. Cook.

Ed. 407. Methods of Teaching Agriculture. 5-0-0

Prerequisites: Ed. 303, 308, or equivalents, and at least 12 credits in Agriculture.

Required of students in Agricultural Education.

Organization of subject matter; teaching techniques; supervised practice; textbooks and reference material; Future Farmers of America; organization of departments of vocational agriculture; agricultural guidance.

Mr. Cook.

Ed. 408. Observation and Directed Teaching. 0-5-0

Prerequisites: Ed. 406, 407, and at least 12 credits in Agriculture.

Required of seniors in Agr. Ed.

Observation and teaching vocational agriculture under supervision; participation in the varied activities of the teacher of vocational agriculture.

Staff in Agricultural Education.

Ed. 411. Evening Classes and Directed Teaching. 0-5-0

Prerequisites: Ed. 406, 407, and at least 12 credits in Agriculture.

Required of seniors in Agr. Ed.

Community activities of teachers of vocational agriculture; organization, method, and directed teaching of evening and part-time classes. Mr. Cook.

Ed. 412. Materials and Methods in Teaching Agriculture. 0-5-0

Prerequisites: Ed. 406, 407, and 12 credits in Agriculture.

Required of seniors in Agr. Ed.

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. 426. Secondary Education in Agriculture. 0-0-3

Prerequisites: Ed. 303, 304, and 6 other credits in Education.

Agricultural education in the United States; school organization; agricultural occupations. Mr. Cook.

Ed. 460. Special Problems in Teaching Agriculture. 3 or 3 or 3

Prerequisites: Ed. 406, 407, or equivalent.

Planning programs of work and courses of study; collecting and preparing materials for teaching; making teaching plans. Mr. Cook and Staff.

Ed. 461 (a-b). Trends in Teaching Vocational Agriculture. 3 or 6 credits

Prerequisites: 18 credits in Education, including 5 in Agricultural Education.

Procedures in teaching vocational agriculture; out-of-school farm youth; evening-class instruction and the F. F. A.

Staff in Agricultural Education.

Ed. 462 (a-b). Course of Study Problems. 3 or 6 credits

Prerequisites: 18 credits in Education, including 5 in Agricultural Education.

Selection and organization of subject matter in vocational agriculture; supervised practice. Staff in Agricultural Education.

Ed. 463 (a-b). Guidance and Individual Instruction. 3 or 6 credits

Prerequisites: 18 credits in Education, including 5 in Agricultural Education.

Individualized instruction applied to vocational agriculture; agricultural occupations, guidance, and counseling with special reference to pupils in vocational agriculture. Staff in Agricultural Education.

Courses for Graduates Only

Ed. 516. Problems in Agricultural Teaching. 3-0-0 or 0-3-0 or 0-0-3

Prerequisites: Ed. 407, and at least 12 other credits in Education and Agriculture. Experience in Agricultural Teaching will be accepted in lieu of Ed. 407.

Investigations, reports, and a critical evaluation of present practices; course adapted to individual interests and needs.

Staff in Agricultural Education.

Ed. 517. 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. 520. 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. Staff.

Ed. 521. Research in Education. 3-3-3

Prerequisite: Eighteen hours in Education and permission to register.

One or more research problems under the guidance of a member of the staff. Staff.

INDUSTRIAL EDUCATION AND INDUSTRIAL ARTS

Ed. (I.A.) 105 a, b, c. Industrial Arts Drawing. 3-3-3

Required of freshmen in Industrial Arts Education.

Fundamentals of pictorial representation, such as layout work, machine, and architectural drawing. Mr. Boshart.

Ed. (I.A.) 106 a, b, c. Orientation in Industrial Arts. 3-3-3

Required of freshmen in Industrial Arts Education.

Provides initial experiences for students interested in teaching Industrial Arts in the secondary school; emphasizes the importance and relation of Industrial Arts to other areas in the school and to individual development.

Mr. Ludington.

Ed. (I.A.) 205. Industrial Arts Design. 0-0-3

Prerequisite: Ed. (I. A.) 105 a, b, c.

Required of sophomores in Industrial Arts Education.

Design and construction in a variety of industrial materials; stressing individual expression and appreciation of well designed industrial products.

Mr. Boshart.

Ed. (I.A.) 206a, b, c. Laboratory Problems in Industrial Arts. 3-3-3

Prerequisites: Ed. (I. A.) 105 a, b, c, and I. A. 106 a, b, c.

Required of sophomores in Industrial Arts Education.

Explorations in drawing, planning, woodwork, metal work, and electricity.

Messrs. Ludington and Boshart.

Ed. (I.A.) 306 a, b, c. Laboratory Problems in Industrial Arts. 3-3-3

Prerequisites: Ed. (I. A.) 105 a, b, c; Ed. (I. A.) 106 a, b, c, and Ed. (I. A.) 206 a, b, c.

Required of all juniors in Industrial Arts Education.

Advanced hand and machine tool techniques in printing, electricity, and metal work; stressing the development of master craftsmanship and an understanding of related social-economic problems.

Mr. Ludington.

Ed. 344. Problems in Secondary Education. 3-0-0

Prerequisites: Ed. 303, and 6 other credits in Education.

Required of juniors preparing to teach industrial subjects.

Problems of secondary education, with special reference to the relationships of industrial subjects with the other elements of the school program.

Mr. Boshart.

Courses for Graduates and Advanced Undergraduates

Ed. 416. Local Survey; Planning a Program. 0-3-0

Methods of surveying local occupations; use of the findings to plan a program of Industrial Education. Mr. Smith.

Ed. 422. Methods of Teaching Industrial Subjects. 3-0-0

Prerequisites: Ed. 304, 344.

Required of seniors in Industrial Arts Education and those preparing to teach vocational classes in trades and industries.

Principles of teaching in the classroom or shop; intended for those who are teaching or preparing to teach shop and drawing courses.
Messrs. Boshart or Ludington.

Ed. 427. Philosophy of Industrial Education. 0 3-0

The philosophy of industrial education, a review of Federal and State legislation pertaining to industrial education; part-time, all-day trade, general industrial, and evening schools. Mr. Smith.

Ed. 433. Field Work in Secondary Education. 0-3-0

Prerequisites: Ed. 344, and 6 credits in Education.

Required of juniors in Industrial Arts Education.

A study of pupil-teacher-community relationships at the secondary school level involving observations, visits, reports, readings, and conferences.
Staff.

Ed. 440. Vocational Education. 3 or 3 or 3

Prerequisites: Ed. 303, 344, and 6 additional credits in Education.

Elective for students in Industrial Arts and Industrial Education.

Problems of vocational education; underlying philosophy; its place in our system of education; the laws governing prevailing practices and administration; agricultural, homemaking, industrial, and commercial vocations; deals with all-day, evening, part-time, and general continuation class work. Staff.

Ed. 444. Observation and Directed Teaching of Industrial Subjects. 3-3-0 or 0-3 3

Prerequisites: Ed. 422, 433.

Required of students who desire an "A" grade certificate to teach industrial subjects.

Observation of and active participation in phases of teacher activity; students will work in actual situations under supervision. Staff.

Ed. S., Ex. 452. Industrial Arts in the Elementary School.

Prerequisite: 12 credits in education and the consent of the instructor.

For advanced undergraduate and graduate students; organized to help students gain insights into the materials, processes, and products of industry fundamental to an understanding of major problems of living. Staff.

Ed. (I.A.) S. 470. Laboratory Problems in Industrial Arts. 3 or 3 or 3

An elective course for undergraduates and graduates with consent of the instructor.

Advanced laboratory conducted on general shop or laboratory of industries basis. Mr. Ludington.

Ed. S., Ex. 480. Modern Industries.

Prerequisite: 12 credits in education and consent of the instructor.

Elective course for advanced undergraduate and graduate students in industrial arts. Designed to assist teachers in guiding students to sources of information relative to various modern industries. Staff.

Ed. 482. Curriculum Problems in Industrial Arts. 3-0-0

A course for advanced undergraduate and graduate students in Industrial Arts Education.

Planning and organizing of learning experiences in the Industrial Arts area. Mr. Ludington.

Ed. 483. Instructional Aids and Devices. 0-3-0

Prerequisites: Ed. 304, and 6 other credits in Education.

Required of those intending to teach Industrial Arts or Industrial Education, and those who because of trade experience desire to teach trade subjects.

Analysis of trades and jobs to determine learning units; preparation of instructional aid and devices. Mr. Ludington.

Ed. 484. Laboratory Planning and Equipment Selection. 0-0-3

A course for advanced undergraduate and graduate students.

The physical planning of school shops and laboratories; selection of hand tools and power equipment. Whenever possible, actual or contemplated school buildings will be used for class work. Mr. Ludington.

Ed. 492. Individual Problems in Education.

An elective course for graduate students in Industrial Arts Education and Industrial Education, with consent of instructor.

Individual and group studies of one or more major problems in Industrial Arts and Industrial Education. Problems will be approached through the application of research techniques with final reports prepared in a form suitable for publication as a magazine article, technical or professional bulletin. Staff.

Courses for Graduates Only

Ed. 510. Administration and Supervision of Vocational Education.

Prerequisites: Ed. 304, 344, 420, 440, or equivalent. 3 or 3 or 3

For graduate students majoring in Education.

Administrative and supervisory problems of vocational education; practices and policies of Federal and State offices; organization and administration of city and consolidated systems. Staff.

Ed. 514. Modern Principles and Practices in Secondary Education. 3 or 3 or 3

Required of graduate students in Guidance, Industrial Arts, and Industrial Education.

Foundations of modern programs of secondary education; purposes, curriculum, organization, administration, and the place and importance of the high school in the community in relation to contemporary social forces. Mr. Ludington.

Ed. 521. Research in Education. 3 or 3 or 3

The student will make a study of one or more research problems under the supervision of some member of the staff of the Department of Teacher 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.

Ed. 530. Philosophy of Industrial Arts. 3 or 3 or 3

Required of all graduate students in Industrial Arts Education; elective for others with consent of the instructor.

Current and historical developments in Industrial Arts; philosophical concepts, functions, scope, criteria for the selection and evaluation of learning experiences, laboratory organization, student personnel programs, community relationships, teacher qualifications, and problems confronting the Industrial Arts profession. Mr. Ludington.

Occupational Information and Guidance

Ed. 103. Occupations. 3 0-0 or 0-3-0 or 0-0-3

Required in Occupational Information and Guidance. Elective for others.

A view of the field of occupations, supplying facts which young persons are entitled to have in deciding upon their life work. Mr. Boshart.

Courses for Graduates and Advanced Undergraduates

Ed. 420. Philosophy of Guidance. 3 or 3 or 3

Prerequisite: 12 credits in education.

The place of guidance in the school program covering the elementary, junior high, and senior high divisions. It will treat of the development of educational and vocational guidance, the relation of personnel work, principles and practices of guidance in employment, and child legislation. Mr. Boshart.

Ed. 423. Methods of Teaching Occupations. 3-0 0

Prerequisites: Ed. 304, 344.

Required of seniors expecting to teach occupational information and guidance and elective for others who are interested.

Principles of teaching occupational information and guidance; the selection and preparation of materials; the literature available, and methods of presentation. Messrs. Boshart and Smith.

Ed. 424. Occupational Studies. 0-0-3

Prerequisite: 12 credits in Education.

Intended to acquaint teachers with the field of occupations; selection of suitable instructional materials and its presentation to pupils; analyses of leading groups of occupations. Mr. Boshart.

Ed. 433. Field Work in Secondary Education. See page 224

Ed. 481. Character Education. 0-0 3

Prerequisite: 12 credits in Education.

Factors influencing character development; opportunities and responsibilities of the school for the conception and attitudes fundamental to good conduct, trends, materials, and procedures. Mr. Cook.

Ed. 490. Individual Problems in Guidance. 3 or 3 or 3

Elective for advanced undergraduate and graduate students interested in the guidance field.

Intended for individual or group studies of one or more of the major problems in guidance and personnel work. Problems will be selected to meet the interests of individuals of the class and approached through research techniques with the idea of preparing suitable material for distribution in mimeographed or bulletin form. Staff.

Courses for Graduates Only

Ed. 512. Problems in Counseling. 0-0-3

Prerequisite: Ed. 420, 432, or equivalent.

Intended for teachers of experience and those interested in the problems of guidance in school and industry; attention to group and individual counseling as applied to the junior and senior high schools, colleges, or placement offices; procedures of conducting interviews and conferences. Mr. Boshart.

Ed. 521. Research in Education. see page 226

PSYCHOLOGY

Ed. 303, 304. Educational Psychology. 3-3-0

(For description of course see Psychology 303, 304) Mr. McGehee.

Ed. 476. Psychology of Adolescence. 0-0-3

(For description of course see Psychology 476) Mr. McGehee.

ELECTRICAL ENGINEERING

Courses for Undergraduates

E. E. 201, 202. Electrical Engineering Fundamentals. 3-3-0 or 0-3-3

Prerequisite: Math. 102.

Required of sophomores in E. E. Concurrent with Phys. 201, 202, 203.

Fundamental laws of electric, magnetic and dielectric circuits; problem drill. Timbie and Bush: *Principles of Electrical Engineering*. Mr. Browne.

Courses for Advanced Undergraduates

E. E. 301, 302, 303. Electrical Engineering. 4-4-4

Prerequisite: E. E. 202.

Required of juniors in E. E.

Principles, performances and characteristics of direct-current apparatus, electronics; theory of periodic currents, alternating-current circuits and systems. Timbie and Bush: *Principles of Electrical Engineering.* Kloeffler, Brennenman and Kerchner: *Direct Current Machinery.* Bryant and Correll: *A. C. Circuits.* Messrs. Fouraker and Pearsall.

E. E. 311, 312, 313. Electrical Engineering Laboratory. 2-2-2

Required of juniors in E. E. Concurrent with E. E. 301, 302, 303.

A laboratory course coördinated with E. E. 301. Ricker and Tucker, *Electrical Engineering Laboratory Experiments.*

Messrs. Lear, Pearsall, Keever, Glenn, and Nichols.

E. E. 320, 321. Elements of Electrical Engineering I. 3-3-0 or 0-3-3

Prerequisites: Math. 202, Phys. 203.

Required of juniors in Aero. E., Chem. E., C. E., H. E., Constr. E., and San. E., and of seniors in Cer. E., Geol. E., and Min. E.

Theory and problems in applied electricity; motor characteristics and industrial applications. Daws: *Industrial Electricity.*

Messrs. Lear, Pearsall, Glenn, and Winkler.

E. E. 331, 332, 333. Elements of Electrical Engineering II. 4-4-4

Prerequisites: Math. 202, Phys. 203.

Required of seniors in M. E., Gen. E., and Industrial Engineering.

Principles, characteristics, and operation of electric equipment. Loew: *Direct and Alternating Currents.*

Messrs. Keever, Pearsall, Glenn, Nichols.

E. E. 343. Electrical Equipment of Buildings. 0-0-3

Prerequisite: Phys. 203.

Required of juniors in Construction Engineering and seniors in Architectural Engineering.

Wiring of buildings for light and power; selection of motors and lighting equipment. Moyer and Wostrel: *Industrial Electricity and Wiring.*

Messrs. Lear and Winkler.

Courses for Graduates and Advanced Undergraduates

E. E. 401, 402. Alternating-Current Machinery. 4-4-0

Prerequisite: E. E. 303.

Required of seniors in E. E.

Principles and characteristics of alternating current-machinery. Bryant and Johnson: *Alternating-Current Machinery.*

Messrs. Fouraker and Keever.

E. E. 403. Electric Transmission. 0-0-4

Prerequisite: E. E. 402.

Theory and characteristics of electric circuits for high tension transmission of power. Bryant and Correll: *Alternating Current Machinery.*

Messrs. Fouraker and Keever.

E. E. 411, 412, 413. Electrical Engineering Laboratory. 2-2-2

Required of seniors in E. E. Concurrent with E. E. 401, 402, 403.

A laboratory course coördinated with classroom work. Ricker and Tucker, *Electrical Engineering Laboratory Experiments.*

Messrs. Keever, Pearsall, Glenn, and Winkler.

E. E. 421, 422, 423. Electric Power Applications (Optional with E. E. 425, 426, 427). 3-3-3

Prerequisites: E. E. 303.

Selection of electric equipment for industrial applications, control equipment; electric traction; electric power plants. Mr. Browne.

E. E. 425, 426, 427. Electric Communication (Optional with E. E. 421, 422, 423). 3-3-3

Prerequisites: E. E. 303.

Circuits and equipment for wire communication; radio and carrier current systems. Everitt: *Communication Engineering.*

Messrs. Fouraker and Glenn.

E. E. 433. Electric Distribution. 0-0-3

Prerequisite: E. E. 401.

Required of seniors in E. E.

Low-voltage distribution systems. Mr. Keever.

E. E. 437. Illumination. 0-0-3

Prerequisites: E. E. 303.

Required of seniors in E. E.

Characteristics of electric lamps; electric lighting systems. Kunerth: *Textbook of Illumination.* **Mr. Lear.**

E. E. 441, 442, 443. Electrical Measurements in Industry. 3-3-3

Prerequisite: E. E. 303 or E. E. 322 or E. E. 333.

Theory and practice of electrical measurements in industry, including electrical methods applied to measurement of nonelectric values.

Mr. Brown.

E. E. 453. Power Network Calculations. 0-0-3

Prerequisite: E. E. 402.

The method of symmetrical components applied to fault calculation in power system networks. Mr. Brown.

Courses for Graduates Only

E. E. 501, 502, 503. Fundamental Principles in Electrical Engineering. 3-3-3

Prerequisites: E. E. 433, 402.

Review of fundamentals involved in the more complex problems encountered in electrical engineering. Messrs. Fouraker, Brown.

E. E. 505, 506, 507. Electrical Engineering Seminar. 1-1-1

Prerequisite: Graduation in E. E.

A series of papers and conferences of junior instruction staff and students who are candidates for advanced degrees in electrical engineering.

Messrs. Browne, Brown.

E. E. 521, 522, 523. Engineering Electronics. 4-4-4

Prerequisite: Graduation in E. E.

Electron tubes in industry, including studies of various types of tubes and their associated circuits. Mr. Brown.

E. E. 531, 532, 533. Illumination Engineering. 3-3-3

Prerequisite: Graduation in E. E.

Advanced principles of Illumination Engineering. Mr. Brown.

E. E. 550. Electrical Engineering Research. 3-3-3

Prerequisite: Graduation in E. E.

Individual research in the field of Electrical Engineering.

Messrs. Browne, Brown.

ENGINEERING MECHANICS

Courses for Advanced Undergraduates

E. M. 301. Engineering Mechanics (Abridged). 3-0-0 or 0-3-0

Prerequisite: Math. 202.

Co-requisites: Math. 303 and Phys. 201.

Required of students in Cer. E., Ch. E., Geol. E., and I. E. Also required of students in Agr. Eng.

Statics: Concurrent, parallel, and nonconcurrent force systems; the determination of their resultants and conditions of equilibrium; friction, centroids and moments of inertia. Poorman: *Applied Mechanics.*

Messrs. Smith, Conner, Gaylord, and Farlow.

E. M. 302. Engineering Mechanics (Abridged). 0-3-0 or 0-0-3

Prerequisites: E. M. 301 and Math. 303.

Required of students in Cer. E., Ch. E., Geol. E., and I. E. Also required of students in Agr. Eng.

Kinematics: The relation between distance, time, velocity, and acceleration for particles and bodies. Kinetics: The motion of bodies as affected by unbalanced forces. Poorman: *Applied Mechanics.*

Messrs. Smith, Conner, Gaylord, and Farlow.

E. M. 311. Engineering Mechanics. 3-0 0 or 0-3-0 or 0-0-3

Prerequisite: Math. 201.

Co-requisites: Math. 202 and Phys. 201.

Required of all students in Engineering except Cer. E., Ch. E., Geol. E., and I. E.

Statics and Friction: Study of concurrent, parallel and nonconcurrent systems of both coplaner and noncoplaner forces; the application of statics to the solution of fundamental engineering problems, including statical friction. Seely and Ensign: *Analytical Mechanics for Engineers.*

Messrs. Smith, Conner, Gaylord, and Farlow.

E. M. 312. Engineering Mechanics. 3-0-0 or 0-3-0 or 0-0-3

Prerequisites: E. M. 311 and Math. 202.

Co-requisites: Math. 303.

Required of all students in Engineering except Cer. E., Ch. E., Geol. E., and I. E.

Kinematics; centroids moments of inertia. Seely and Ensign: *Analytical Mechanics for Engineers.* Messrs. Smith, Conner, Gaylord, Farlow.

E. M. 313. Engineering Mechanics. 3-0-0 or 0-3-0 or 0-0-3

Prerequisites: E. M. 312 and Math. 303.

Required of all students in Engineering except Cer. E., Ch. E., Geol. E., and I. E.

Kinetics: The motions of particles of rigid bodies as they are affected by the action of unbalanced forces. The Newtonian laws of motion; work and energy; power, impulse and momentum; applications to special engineering problems: Seely and Ensign: *Analytical Mechanics for Engineers.*

Messrs. Smith, Conner, Gaylord, and Farlow.

E. M. 321. Strength of Materials. 0-3-0 or 0-0-3

Prerequisites: E. M. 302 or E. M. 312, and Math. 303.

Co-requisite: E. M. 313.

Required of all students in Engineering.

Stresses and strains in engineering materials; tension, compression, shear, and torsion; emphasis on the applications to engineering structures; bending moments and shear in simple beams; fibre stresses in beams and their distribution throughout the cross section. Timoshenko and McCullough: *Elements of Strength of Materials.*

Messrs. Smith, Conner, Gaylord, and Farlow.

E. M. 322. Strength of Materials. 3-0-0 or 0-0-3

Prerequisite: E. M. 321.

Required of all students in Engineering except Chem. E., E. E., Geol. E., and Ind. E.

A continuation of E. M. 321. Various methods for finding the deflection of beams; determination of stresses in statically indeterminate beams; the study of columns; combined stresses. Timoshenko and McCullough: *Elements of Strength of Materials.*

Messrs. Smith, Conner, and Gaylord.

E. M. 330. Fluid Mechanics. 3 0-0, 0-3-0, or 0-0-3

Prerequisites: E. M. 302 or E. M. 313.

Required of students in Aero. E., Ch. E., C. E., E. E., Geol. E., M. E.

A study of the fundamental principles of mechanics of fluids; properties of fluids; intensity of pressure; hydrostatic pressure on areas; applications of hydrostatics; kinematics of fluid flow; dynamics of fluid flow; applications of hydrokinetics; friction losses in pipes; flow through pipes; dynamic forces. Daugherty: *Hydraulics.*

Messrs. Conner, Riddick, and Gaylord.

E. M. 331. Hydraulics. 3-0-0 or 0-3-0

Prerequisite: E. M. 330.

Required of students in E. E. and M. E.

The application of the principles of fluid mechanics to hydraulic pumping and power machinery; impulse and reaction type turbines; turbine laws and factors; water power plants; pumping and machinery, reciprocating and centrifugal pumps; efficiency, capacity, and selection of pumps. Daugherty: *Hydraulics,* and *Notes.* Messrs. Conner, Riddick, and Gaylord.

E. M. 332. Hydraulics. 0-3-0 or 0-0-3

Prerequisite: E. M. 330.

The application of the principles of fluid mechanics to various hydraulic structures and measuring devices; bouyant force and flotation; weirs, orifices, gates; forces exerted by fluids; flow in open channels; models of open channel flow, flow in pipe lines. Daugherty: *Hydraulics,* and *Notes.*

Messrs. Conner, Riddick, and Gaylord.

Courses for Graduates and Advanced Undergraduates

E. M. 401. Advanced Strength of Materials. 3-0-0

Prerequisites: E. M. 320 or E. M. 322.

Elective for Engineering seniors and graduate students.

Detailed study of the deflections of beams; special types of beams; statically indeterminate systems. Timoshenko: *Strength of Materials.*

Mr. Smith.

E. M. 402. Advanced Fluid Mechanics. 0-3-0

Prerequisite: E. M. 330.

Elective for Engineering seniors and graduates.

A study of more advanced problems than taken up in E. M. 330; kinematics of fluid flow; conformal mapping; laminar and turbulent flow; the boundary layer; flow around immersed bodies; closed conduits. Instructor's notes and selected references. Mr. Conner.

E. M. 404. Vibration Problems. 0-0-3

*Prerequisites: E. M. 320 and 322, Math. 431a, or 431b.

Elective for Engineering seniors and graduate students.

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. Den Hartog: *Mechanical Vibrations.* Mr. Conner.

Courses for Graduates Only

E. M. 501. Advanced Strength of Materials. 3-0-0

Prerequisites: E. M. 401, Math. 431a or 431b.

A study of more advanced problems than taken up in E. M. 320 or E. M. 322; energy of strain; Castigliano's Theorem; impact; Maxwell's Theorem; Mohr's circle. Timoshenko: *Strength of Materials.* Mr. Smith.

E. M. 502. Applied Elasticity. 0-3-0

*Prerequisites: E. M. 401, Math. 431a or 431b.

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. Timoshenko: *Strength of Materials.* Mr. Smith.

E. M. 503. Applied Elasticity. 0-0-3

*Prerequisites: E. M. 502, Math. 431a or 431b.

Thin bars, plates and slabs in compression, tension, or combined compression and tension; built-up columns. Timoshenko: *Strength of Materials.* Mr. Smith.

E. M. 505. Research in Strength of Materials. 3-3 3

Special problems and investigations. Mr. Smith.

***E. M. 506. Research in Mechanical Vibrations.** 3-3-3

Prerequisite: E. M. 404.

Special problems and investigations. Mr. Conner.

***E. M. 507. Research in Fluid Mechanics.** 3-3-3

Prerequisite: E. M. 402.

Special problems and investigations. Mr. Conner.

* Math. 411, 412 are desirable.

ENGLISH

Freshman English

Eng. 101, 102, 103. Composition. 3-3-3

Required of all freshmen.

Grammar review and intensive practice in composition; reading and analysis of literary types, with emphasis upon both composition and appreciation; directed supplementary reading collateral with class study; exercises and reports; conferences.

Messrs. Cameron, Chadbourn, Clark, Davis, Gibson, Hartley, Kincheloe, Kruger, Ladu, Lyell, Marshall, Shackford, Shelley, Wynn, Wynne.

Writing

Eng. 211. Business English. 3 or 3 or 3

Prerequisite: Eng. 101, 102, 103.

Practical application of the principles of composition; types of letters; form, style, and tone of effective correspondence; intensive word study; conferences. Messrs. Wilson, Shelley.

Eng. 215. Principles of News and Article Writing. 3-0-3

Prerequisite: Eng. 101, 102, 103. (Class limited to twenty students.)

Introduction to the writing of simple news articles; class criticism of nontechnical newspaper and magazine articles. Vocabulary building; collateral reading. Mr. Wynn.

Eng. 216. Advanced Article Writing. 0-3-0

Prerequisite: Eng. 101, 102, 103, and 215 or equivalent.

A continuation of Eng. 215, with intensive practice in writing and criticizing nontechnical articles. Subjects determined by student's interest. Vocabulary building; collateral reading. Mr. Wynn.

Eng. 222. Advanced Composition. 0-3-0

Prerequisite: Eng. 101, 102, 103.

Analysis of the technique of prose style, especially in the short story and the essay; original compositions; conferences. Mr. Shelley.

Eng. 321. Technical Writing I. (For students in Engineering.) 3 or 3 or 3

Prerequisites: Eng. 101, 102. 103, 211, 231, and one term of literature.

Intensive practice in writing engineering reports, articles, and papers for public delivery; readings in essays and in technical periodicals. Term papers in library research and technical-report writing. Mr. Fountain.

Eng. 323. Technical Writing II. (For students in Agriculture and Forestry.) 0-0-3

Prerequisites: Eng: 101, 102, 103, and required sophomore English courses.

Fundamentals of style in professional writing. Reports, articles, papers. Term papers in library research and in professional reports. Mr. Fountain.

Speech

Eng. 231. Public Speaking. 3 or 3 or 3

Prerequisites: Eng. 101, 102, 103.

Speech organization and effective delivery; extempore speeches; audience motivation and use of motivating process; acquisition of ease before audience. Messrs. Paget, Fountain, Wynne.

Eng. 236. Parliamentary Practice. 0-2 0

Prerequisites: Eng. 101, 102, 103.

Not to be counted toward the fulfillment of any requirement in English.

Rules and customs of assemblies, including organization, motions; participation in and conduct of meetings; parliamentary strategy. Mr. Paget.

Eng. 237. Speech Adjustment. 0-0-2

Prerequisites: Eng. 101, 102, 103.

Poise and pleasing communicative habits in all group contacts; habits of speech, posture, action, and language. Mr. Paget.

Eng. 331. Persuasion. 3-0-0

Prerequisite: Eng. 231 or equivalent.

Psychological forces, methods of conciliation, securing and holding attention, and winning response; extempore speeches and discussions.

Mr. Paget.

Eng. 332. Argumentation and Extemporaneous Speaking. 0-3-0

Prerequisite: Eng. 231 or equivalent.

Analysis, brief drawing and evidence, and methods of proof and refutation; fundamentals of conviction; naturalness and forcefulness; extempore speeches, debates, and discussions. Mr. Paget.

Eng. 333. Public Address. 0-0-3

Prerequisite: Eng. 231 or equivalent.

Public speaking for special occasions, including speech of introduction, committee-room speech, after-dinner speech, speech at professional convention, political speech, formal sales talk. Mr. Paget.

Eng. 334. Radio Speaking. 2-0-0

Not to be counted toward the fulfillment of any requirement in English.

Prerequisites: English 231, or equivalent; approved admittance by the instructor.

A laboratory practice in the skills of radio speech; the physical properties of voice; diction; tempo; emotion. Mr. Wynne.

Literature

Eng. 261. English Literature I. 3-0-0

Prerequisites: Eng. 101, 102, 103.

Chief masterpieces of English literature from *Beowulf* through Shakespeare, with emphasis on social and historical backgrounds. Parallel readings and papers. Messrs. Hartley, Clark.

Eng. 262. English Literature II. 0-3-0

Prerequisites: Eng. 101, 102, 103.

Significant prose and poetry of the seventeenth and eighteenth centuries, with emphasis on the contribution of the two centuries to modern thought. Parallel readings and papers. Messrs. Hartley, Clark, Lyell.

Eng. 263. English Literature III. 0-0-3

Prerequisites: Eng. 101, 102, 103.

Masterpieces of the nineteenth century, with emphasis on changing literary tastes and ideas; the impact of scientific development on thought and literature. Parallel readings and papers. Messrs. Hartley, Clark, Lyell.

Eng. 265. American Literature I. 3-0-0

Prerequisites: Eng. 101, 102, 103.

A study of chief American literary productions in their historical setting, from the early colonial period to 1840. Mr. Ladu.

Eng. 266. American Literature II. 0-3-0

Prerequisites: Eng. 101, 102, 103.

A study of chief American literary productions in their historical setting, from 1840 to 1900. Mr. Ladu.

Eng. 267. American Literature III. 0-0-3

Prerequisites: Eng. 101, 102, 103.

A study of the leading American writers of the present century, with a relation of their works to the social background of the period. Mr. Ladu.

Eng. 271. The English Novel. 3-0-0

Prerequisites: Eng. 101, 102, 103.

Analysis of representative novels of England and America, chosen to illustrate the development of the form and to provide a background for appreciating the modern novel. Mr. Lyell.

Eng. 272. Modern Drama. 0-0-3

Prerequisites: Eng. 101, 102, 103.

Modern plays, beginning with Ibsen; contemporary English and American productions. Mr. Clark.

Eng. 273. The Development of the Drama. 0-0-3

Prerequisites: Eng. 101, 102, 103.

Origin, progress, and influence; plot, characterization, and interpretation of certain readings. Staff.

Eng. 275. Southern Writers. 3 0-0

Prerequisites: Eng. 101, 102, 103.

An introduction to Southern culture as revealed in poetry from Poe to John Crowe Ransom and in the regional novel and short story; readings in the contemporary Southern essay dealing with social, political, and literary problems. Mr. Kincheloe.

***Eng. 276. English Poetry, 1830-1900.** 0-3-0

Prerequisites: Eng. 101, 102, 103.

A study of major poets writing in an age of scientific progress and social change. Emphasis on Browning, Tennyson, and Arnold. Parallel readings and papers. Mr. Hartley.

Eng. 281. Literary Masterpieces. 3-0-0

Prerequisites: Eng. 101, 102, 103.

A background for the enjoyment of literature; an introduction to its appreciation and criteria. Mr. Harrison.

Eng. 282. The Short Story. 0 0-3

Prerequisites: Eng. 101, 102, 103.

An appreciation of the present-day short story through examination of development, structure, type, and style; a comprehensive term paper, or its equivalent in original short fiction. Mr. Wynne.

Eng. 283. The Bible as Literature. 0-3-0

Prerequisites: Eng. 101, 102, 103.

Selected books of the Old and the New Testament (King James Version) as literary and historical documents. Mr. Cameron.

Eng. 285. Shakespeare. 3-0-0

Prerequisites: Eng. 101, 102, 103.

An analysis of principal plays. Reports on parallel readings.
Messrs. Clark, Hartley.

Eng. 286. The Romantic Period. 0-3 0

Prerequisites: Eng. 101, 102, 103.

English literature from 1790 to 1830, with special emphasis on Wordsworth, Coleridge, Byron, Shelley, and Keats; collateral reading; reports.
Messrs. Clark, Hartley.

Eng. 287. Modern Biography. 0-0-3

Prerequisites: Eng. 101, 102, 103.

A study of short modern biographies by representative American and British writers; collateral reading in longer biographical works; reports and assignments for investigation. Mr. Shelley.

* Not offered in 1942-43.

Eng. 291. The Eighteenth Century. 0-3-0

Prerequisites: Eng. 101, 102, 103.

Chief masterpieces of English literature from Alexander Pope to nineteenth century; collateral reading; reports. Mr. Hartley.

Eng. 292. Contemporary British Literature. 0-0 3

Prerequisites: Eng. 101, 102, 103.

An introduction to chief figures in contemporary British literature; Kipling, Galsworthy, Wells, Bennett, Conrad. Collateral readings; term paper. Mr. Ladu.

ETHICS AND RELIGION

Courses

Rel. 301. Introduction to Religion. 3-0-0

Characteristics of the major religious sects of America and brief survey of recent trends in religious thought. Mr. Hicks.

Rel. 302. The Life of Jesus. 3 0-0

The career of Jesus of Nazareth as recorded in the Synoptic Gospels and interpreted against the religious, economic, and political background of the age in which Jesus lived. Mr. Hicks.

Rel. 303. The Teachings of Jesus. 0-3-0

The ethical and religious teachings of Jesus as recorded in the Synoptic Gospels, with special emphasis on the contrast between the teachings of Jesus and his contemporaries. Mr. Hicks.

Rel. 304. Comparative Religion. 0-3-0

Brief history, general characteristics, and social significance of living religions of the world. Mr. Hicks.

Ethics 405. Social Ethics. 0-0 3

Prerequisite: Six term credits in Religion or related fields.

Review of the ethical codes of the larger professional groups, with analysis of the nature, evolution, and significance of moral values. Mr. Hicks.

Rel. 406. Problems of Religion. 0-0-3

Prerequisite: Six term credits in Religion, or related fields.

Religious verities in an age of science and the problems of the church in modern times. Mr. Hicks.

Ethics 407. Ethical Problems of Adolescence. 3 credits

Prerequisite: Six term credits in Religion or related fields.

Typical adjustment problems of modern youth, with special emphasis upon sex instruction and orientation. Mr. Hicks.

Rel. 408. Christian Personality in Its Psychological Aspects. 3 credits

Prerequisite: Six term credits in Religion or related fields.

An analysis of the psychological validity of the principal ethical teachings of the Sermon on the Mount with emphasis on the relationship of religious attitudes and practices to mental and emotional stability and maturity. Mr. Hicks.

Ethics 409. Problems of Marital Adjustment. 3-0-0 or 0-3-0 or 0-0-3

Prerequisite: Six term credits in biological or social science. Sections limited to 25 students.

The practical application of pertinent findings of biological and social science to personal problems of premarriage and postmarriage adjustment. Lectures, discussions, and personal conferences. Mr. Hicks.

EXPERIMENTAL-STATISTICS

Courses for Graduates and Advanced Undergraduates

Stat. 401, 402. Statistical Laboratory. 1-1-0

To accompany Stat. 412, 413 or Ec. 408, 409.

Use of calculating machines and of punched-card tabulation equipment; short-cut machine methods; experience in handling large sets of data. Mr. Monroe.

Stat. 411. Introduction to Experimental-Statistics. 3-0-0

Collection, tabulation, presentation, and interpretation of experimental data. A course designed for advanced students in applied sciences who have had no theoretical background in statistics. Miss Cox.

Stat. 412, 413. Experimental-Statistics. 0-3-3

Prerequisite: Stat. 411 or Ec. 409.

The application of statistical techniques such as sampling, regression and analysis of variance and covariance to experimental data. Mr. Rigney.

Stat. 421, 422, 423. Mathematical Statistics. 2-2-2

Prerequisite: Math. 303.

Averages, moments, correlation, probability; the binomial, normal and Poisson laws; distribution of statistics, sampling of population, Sheppard's corrections and curve fitting. Mr. Clarkson.

Stat. 431. Design of Experiments. 3 or 3 or 3

Prerequisite: Stat. 412.

Fundamental principles of designs; randomized blocks, Latin squares, split plot and factorial designs; individual comparisons, components of error and confounding. Application to problems in biological and applied fields. Miss Cox.

Stat. 441. Statistical Analysis of Economic Data. 3-0-0 or 0-0-3

Prerequisite: Stat. 412.

Index numbers, time series, analysis of variance and relationships between acreage, production data and farm prices. Application to problems in the fields of economics.

Stat. 451. Statistical Analysis of Social Data. 3-0-0 or 0-0-3

Prerequisite: Stat. 412.

Sampling social data, rural surveys and testing methods; analysis of variance and relationships; population studies. Application to problems in the fields of sociology, psychology and education. Mr. Hamilton.

Courses for Graduates Only

Stat. 511, 512, 513. Special Problems. 1 to 3-1 to 3-1 to 3

Development of techniques for specialized cases, particularly in connection with thesis problems. Staff.

Stat. 531. Design and Analysis of Samplings. 3-0-0

Prerequisite: Stat. 441.

Sampling from a homogeneous population; size of sample; structure of sampling investigations.

Stat. 532, 533. Crop Forecasting and Estimation. 0-3-3

Prerequisite: Stat. 531.

Methods used to select variables related to crop forecasting and estimating; selection techniques.

Stat. 542, 543. Experimental Designs. 0 3-3

Prerequisites: Stat. 413, 431.

Confounding, quasi-factorial designs, incomplete blocks and lattice squares. Pasture, field, greenhouse, animal, human and long-time experiments. Survey of type of designs available. Experimental results with appropriate methods of analysis and valid interpretations. Miss Cox.

Stat. 552, 553. Econometric Methods. 0-3-3

Prerequisites: Stat. 413, 441.

Mathematical formulation and exposition of demand, laws of production, monopoly and taxation; random element, seasonal and cyclical variations; trend, orthogonal polynomials and correlation of time series.

Stat. 562. Psychometric Methods. 0-3-0

Prerequisites: Stat. 413, 451.

Rating scales; mental-test methods; item and factor analysis; standard partial regression coefficients and functional relationships.

Stat. 571, 572, 573. Advanced Mathematical Statistics. 3-3-3

Prerequisite: Stat. 423.

Theory of errors, maximum likelihood, estimation, least squares and distribution theory.

Stat. 581, 582, 583. Seminar. 1-1-1
Staff.

Stat. 591, 592, 593. Research. 3-3-3
Staff.

FIELD CROPS (AGRONOMY)

Courses for Undergraduates

F. C. 202. General Field Crops. 0 3-0 or 0-0-3

Required of sophomores in Agriculture.

A standard introductory course, with emphasis given to the economic production of field crops as used in well-balanced cropping systems.

Mr. Stuart.

F. C. 211. Cotton. 3-0-0

Required of sophomores in Textiles.

History, botany, and physiology of the cotton plant; comparative study of varieties; microscopic studies of the fiber; physical properties of the fiber as it affects milling quality. Mr. Stuart.

F. C. 212. Cotton Classing I. 0-3-0

Required of sophomores in Textile Manufacturing, Chemistry and Dyeing, and Designing.

Universal standards of American upland cotton for grade and staple; factors that determine grade, and their relative value; practice in classing and stapling from three to five thousand samples of cotton. Mr. Holman.

Courses for Advanced Undergraduates

F. C. 302. Cereal Crops. 0-3-0

Required of Field-Crop majors.

Advanced study of the various factors to be considered in the economic production of corn and small grains. Mr. Middleton.

F. C. 312. Tobacco Production. 0-3 0

Elective for juniors and seniors in Agriculture.

History, production, adaptation, type, and varieties of tobacco; its cultivation, harvesting, grading, and marketing. Laboratory consists of variety studies and the grading of tobacco. Messrs. Floyd, Weeks.

F. C. 323. Cotton Production. 0-0 3

Elective for juniors and seniors in Agriculture.

History, production, adaptation, type, and varieties of cotton; its cultivation, harvesting, grading, and marketing. Laboratory consists of variety studies, and the classing of cotton lint. Mr. Stuart.

Courses for Graduates and Advanced Undergraduates

F. C. 402. Cotton Classing II. 0-3-0

Elective for juniors and seniors in Agriculture.

A study of the universal standards of American upland cotton for grade and staple; factors that determine grade and how to improve them; practice classing from three to five thousand samples of North Carolina cotton.
Mr. Holman.

F. C. 441. Seed Judging. 3-0-0

Elective for juniors and seniors in Agriculture.

Advanced study of quality in crop seeds and the standards for seed certification; arranging and judging crop exhibits. Mr. Stuart.

F. C. 413. Pastures and Forage Crops. 0-0-4

Prerequisite: F. C. 202.

Required of Field Crop, Soil, and Animal Production majors.

An advanced study of the production and preservation of the principal forage crops. Special attention is given to the production and maintenance of pastures. Mr. Lovvorn.

F. C. 451. Market Grading of Field Crops. 3-0-0 or 0-3-0

Required of students in Animal Production.

A study and application of the Federal Standards for Market grades as applied to field crops. Mr. Stuart.

F. C. 461. Taxonomy of Field Crops. 3-0-0 or 0-0-3

Elective for juniors and seniors in Agriculture.

Origin, botanical classification, identification, and adaptation of the commercially important crops and their varieties grown in America.
Mr. Stuart.

F. C. 463. Plant Breeding. 0-0-3

Prerequisite: Zool. 411.

Required of students in Field Crops, Floriculture, Plant Pathology, Pomology and Vegetable Gardening.

Lectures, field and laboratory exercises, including methods and principles of plant breeding. Mr. Harvey.

F. C. 491, 492, 493. Special Problems. 3-3 3

Prerequisite: Admittance only with consent of instructor.

Special problems in various phases of crop investigation. Problems selected or assigned; emphasis on review of recent and current research. Staff.

Courses for Graduates Only

F. C. 503. Research Methods in Agronomy. 0 0-3

Prerequisite: Stat. 412.

Planning and conducting research and interpretations of the data in agronomic fields. Mr. Rigney.

F. C. 523. Cytogenetics. 0-0-4

Prerequisite: Zoöl. 411, 412, and Bot. 451 or Zoöl. 441.

Given coöperatively by Agronomy and Botany Departments.

The principles and techniques of cytology as they are related to the genetics of economic plants; a survey of the major cytogenetic contributions to plant improvement and to theories of phylogeny. Mr. Smith.

F. C. 531, 532, 533. Seminar. 1-1-1

Prerequisite: Graduate standing 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. Staff.

F. C. 541, 542, 543. Research.

Prerequisite: Graduate standing in Field Crops.

A study of special problems and methods of investigation. A student may select a problem in any phase of crop production or breeding. By arrangement. Staff.

Research in specialized phases of Field Crops.

FORESTRY

Courses for Undergraduates

For. 101, 102, 103. Elementary Forestry. 1-1-1

Required of freshmen in Forestry.

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 included. Mr. Hofmann.

For. 111. Principles of Farm Forestry. 3-0-0

Required of sophomores in Agriculture.

Elective for junior and senior students not in Forestry.

The theory and practice of forestry with special reference to the handling of farm woodlands and the utilization of their products; the place of forestry in farm management and the agricultural economy.

Mr. Chalfant.

For. 202. Wood Technology. 0-3-0

Required of sophomores in Forestry.

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. s204. Silviculture. 3 credits

Prerequisites: Bot. 211, 213.

Sophomore summer camp.

Growth and development of forest stands: establishment and measurement of sample plots. Messrs. Miller, Slocum.

For. s214. Dendrology. 3 credits

Prerequisites: Bot. 211, 213.

Sophomore summer camp.

Identification and study of trees in Piedmont, Coastal, and Mountain sections of North Carolina. Messrs. Slocum, Miller.

For. 301. Timber Preservation. 3 0-0

Prerequisite: For. 202.

Elective for juniors and seniors in Forestry.

Lumber and timber preservatives and their use; methods of preservation; relation of preservation to forestry and industry. Mr. Slocum.

Courses for Advanced Undergraduates

For. s304. Mensuration. 3 credits

Prerequisites: C. E. 221, 222.

Sophomore summer camp.

Collection of field data for stand and yield tables, stem analysis, and timber surveys. Messrs. Slocum, Miller.

For. 311. Silviculture I. 3-0-0

Required of juniors in Forestry.

Factors affecting tree growth and distribution; forest regions, sites, stands, and types; silvical requirements of important tree species. Mr. Miller.

For. 312. Silviculture II. 0-3-0

Required of juniors in Forestry.

Production, collection, extraction, storage, and planting of forest-tree seeds. Mr. Slocum.

For. 313. Nursery Practice. 1 or 1 or 1

Preparation, seeding, watering, and weeding of seed beds in school nursery. Mr. Slocum.

For. 321. Forest Products. 3 0 0

Prerequisite: For. 202.

Required of seniors in Forestry.

The source and method of obtaining derived and manufactured forest products other than lumber. Mr. Wyman.

For. 322. Naval Stores. 0-3-0

Elective for juniors.

Methods of turpentining woods practices; factors influencing oleoresin yields; distilling practices; integration with other forest products utilization. Mr. Wyman.

For. 323. Forest Utilization. 0-0-2

Required of seniors in Forestry.

The problems of more complete utilization of forest resources; utilization of present waste in commercial practice. Mr. Wyman.

For. 332. Forest Policy. 0-3-0

Elective for juniors in Forestry.

The development of the forestry movement in the United States; forest legislation. Mr. Miller.

For. 333. Methods of Research in Forestry. 0-0-3

Prerequisite: For. s204.

Elective for 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. 342. Forest Protection and Improvements. 0-3-0

Prerequisite: For. s204.

Required of juniors in Forestry.

Organization and operation of forest fire prevention and control methods. Forest road and telephone line construction and maintenance.
Mr. Chalfant.

Courses for Graduates and Advanced Undergraduates

For. 402, 403. Mensuration I, II. 3-3-0

Prerequisite: For. s304.

Required of juniors in Forestry.

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.
Mr. Slocum.

For. 411. Silviculture III. 3-0-0

Prerequisite: For. 312.

Required of seniors in Forestry.

Methods of cutting to secure natural regeneration; intermediate cuttings, and their effect on the stand; slash disposal. Mr. Miller.

For. 412. Silviculture IV. 0-3-0

Prerequisite: For. 411.

Required of seniors in Forestry.

The application of silvicultural methods in the forests of the United States. Mr. Miller.

For. 421. Logging. 3-0-0

Prerequisite: For. 311.

Required of seniors in Forestry.

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. 422. Lumbering. 0-3-0

Elective for seniors.

The manufacture and re-manufacture, transportation and handling of lumber; grades and grading of lumber. Mr. Wyman.

For. 423. Lumber Seasoning. 0-0-2

Elective for seniors.

Air-seasoning and kiln-drying of lumber; kiln construction and operation; defects and their control. Mr. Wyman.

For. 431, 432. Forest Management. 3-3-0

Prerequisite: For. 311.

Required of seniors in Forestry.

Management of timber lands for economic returns; the normal forest taken as the ideal; the application of regulation methods to the forest; a typical working circle as developed by the United States Forest Service studied for each forest region. Mr. Hofmann.

For. 433. Advanced Wood Technology. 0-0-3

Prerequisite: For. 202.

Elective for juniors and seniors in Forestry.

Advanced microscopic identification of the commercial woods of the United States; microscopic work in anatomy and identification. Mr. Slocum.

For. 442. Forest Finance. 3-0-0

Prerequisite: For. 311.

Required of juniors in Forestry.

Forests as investments: interest, carrying charges, financial maturity; relation of intermediate to final and net incomes; forest taxation, hazards in forest investments, and forest insurance. Mr. Wyman.

For. 443. Timber Appraisal. 0-0-2

Required of seniors in Forestry.

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. 452. Seminar. 0-2-0

Required of seniors in Forestry.

A round-table discussion of forestry problems; trends of development in forestry and related sciences. Forestry Faculty.

For. 453. Senior Field Trip. 0-0-3

Required of seniors in Forestry.

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 required. Mr. Wyman.

For. 461, 462, 463. Forestry Problems. 3 3-3

Elective for seniors in Forestry.

Assigned or selected problems in the field of silviculture, logging, lumber manufacturing, or forest management. Staff.

Courses for Graduates Only

For. 501, 502, 503. Advanced Forest Management Problems. 3-3-3

Complete management program for a specific forest area. Mr. Hofmann.

For. 511, 512, 513. Advanced Silviculture Problems. 3-3-3

Advanced problems or experiments in silviculture. Mr. Miller.

For. 521, 522, 523. Advanced Logging Problems. 3-3-3

Selected research logging problems of an advanced nature. Mr. Wyman.

For. 531, 532, 533. Advanced Lumber Manufacturing. 3-3-3

Selected advanced problems dealing with the manufacture and seasoning of lumber. Mr. Wyman.

For. 541, 542, 543. Advanced Utilization Problems. 3-3-3

Problems of an advanced grade in some phase of forest utilization. Mr. Wyman.

For. 551, 552, 553. 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. 561, 562, 563. Problems in Research. 3-3-3

Specific forestry problems that will furnish material for a thesis. Mr. Miller.

GEOLOGY

Courses for Undergraduates

Geol. 101. Earth History. 0-3-0

Elective. Not to be taken after Geol. 120, 220, and 222.

Introductory course in General Geology: changes in the earth, and underlying physical and life processes. Bradley: *The Earth and Its History.* Mr. Stuckey.

Geol. 120. Physical Geology. 4 or 4 or 4

Required of freshmen in Basic Agriculture and Agricultural Education, and of sophomores in Forestry and Landscape Architecture.

Dynamic processes acting on and within the earth; materials and make-up of the earth's crust. Lectures, laboratories, and field trips. Longwell, Knopf, and Flint: *Outlines of Physical Geology.* Messrs. Stuckey, Parker, West, Teague.

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; physical geography of North Carolina. Mr. Stuckey.

Geol. 220. Engineering Geology. 3 0-0 or 0-0 3

Prerequisite: Chem. 101.

Required of sophomores in Agricultural, Ceramic, Civil, Geological, Highway, and Sanitary Engineering.

The principles of general geology and their application to engineering problems. Lectures, laboratories, and field trips. Ries and Watson: *Elements of Engineering Geology.*

Messrs. Stuckey, Parker, West, Teague.

Geol. 222. Historical Geology. 0-3-0

Prerequisite: Geol. 120 or 220.

Required of sophomores in Geological Engineering.

Major events in the history of North America; rise and development of main animal and plant groups. Lectures, laboratories and field trips. Schuchert: *Outlines of Historical Geology.* Mr. Parker.

Geol. 223. Geomorphology. 0-0-3

Prerequisite: Geol. 120 or 220.

Required of sophomores in Geological Engineering.

A systematic study of land forms and their relations to processes and stages of development and adjustment of topography to structure. Lectures, map interpretations, and field trips. Lobeck, *Geomorphology.*

Mr. Stuckey.

Geol. 230. Mineralogy. 3-0-0 or 0-0-3

Prerequisite: Chem. 101, 103, 105.

Required of sophomores in Ceramic and Geological Engineering, and of seniors in Chemical Engineering.

Crystallography, and physical and chemical mineralogy. Lectures and laboratory work. Kraus and Hunt: *Mineralogy.*

Messrs. Stuckey, Parker, West.

Geol. 325. Geology and Mineral Resources of North Carolina. 3-0-0

Prerequisite: Geol. 222.

Physical geography, general geology, common rocks and minerals, and mines and quarry products of the State. Lectures, laboratories, and field trips. Mr. Stuckey.

Geol. 332. 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. Lectures and laboratory work. Mr. Stuckey.

Geol. 338. Thermal Mineralogy. 0-3-0

Prerequisites: Geol. 230 and Chem. 231.

Required of juniors in Cer. E.

A study of the behavior of ceramic materials as controlled by variations in composition, temperature, and pressure. Mr. Stuckey.

Geol. 352. Structural Geology. 0-4-0

Prerequisite: Geol. 120 or 220.

Required in Geological Engineering.

The arrangement and deformation of the different rock masses composing the earth's crust. Lectures, laboratories and field trips. Nevin: *Principles of Structural Geology.* Mr. Parker.

Geol. 353. Geophysics. 0-0-4

Prerequisites: Geol. 352, Phys. 203, C. E. 226.

Required of juniors in Geological Engineering.

Discussion of the fundamental principles underlying all geophysical methods; procedure and instruments involved in gravitational, magnetic seismic and electrical methods; study of applications and interpretation of results. Mr. West.

Geol. 361. Stratigraphy and Index Fossils. 3-0-0

Prerequisite: Geol. 222.

Required of juniors in Geological Engineering.

Distribution and conditions of origin of principal geologic formations in Southeastern United States; key fossils characteristic of each period. Mr. Parker.

Courses for Graduates and Advanced Undergraduates

Geol. 411, 412, 413. Economic Geology. 3-3-3

Prerequisites: Geol. 120 or 220; Geol. 230; Chemistry 103.

Required of seniors in Geological Engineering.

Mode of occurrence, association, origin, distribution, and uses of economically valuable minerals. Lectures, laboratories, and field trips. Ries: *Economic Geology*, 7th Edition. Mr. Stuckey.

Geol. 431, 432, 433. Optical Mineralogy. 3-3-3

Prerequisites: Geol. 230, and Phys. 203.

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. Lectures and laboratory work. Rogers and Kerr: *Thin-Section Mineralogy.*

Messrs. Stuckey, Parker.

Geol. 443. Petrology. 0-0-4

Prerequisites: Geol. 120 or 220; Geol. 230; and Chemistry 103.

Required of juniors in Geological Engineering.

Materials of the earth's crust; composition, texture, classification, identification, and alterations of the principal igneous, sedimentary, and metamorphic rocks. Lectures, laboratories, and field trip. Grout: *Kemp's Handbook of Rocks.* Mr. Parker.

Geol. 462. Advanced Engineering Geology. 0-3-0

Prerequisite: Geol. 220.

Required of seniors in Geological Engineering.

The application of geologic principles to civil engineering practice; analysis of geologic factors and processes affecting specific engineering projects. Legget: *Geology and Engineering.* Mr. West.

Geol. 463. Geological Surveying. 0-0-4

Prerequisites: Geol. 352 and 443.

Required of seniors in Geological Engineering.

Methods of field observation and the use of geologic surveying instruments; construction of a complete geologic map of a specific area. Lectures, laboratories, and field trips. Mr. Parker.

Geol. 471, 472, 473. Mining Engineering, Mine Design, Ore Dressing. 3-3-3

Prerequisites: Geol. 230 and 352; C. E. 222 and 225.

Required of seniors in Geological Engineering.

Mining methods, both open pit and underground; mine examination and valuation; principles of ore dressing; problems in mine design. Young: *Elements of Mining.* Mr. West.

Courses for Graduates Only

Geol. 511, 512. Advanced Economic Geology. 3-3-0

Prerequisites: Geol. 411, 412, 413.

Detailed study of the origin and occurrence of specific mineral deposits. Mr. Stuckey.

Geol. 543. Advanced Petrography. 0-0-3

Prerequisites: Geol. 433, 443.

Application of the petrographic microscope to the systematic and descriptive study of rocks. Messrs. Stuckey, Parker.

Geol. 591, 592, 593. Geological Research. 3-3-3

Prerequisite: Permission of the Instructor.

Lectures, reading assignments, and reports; special work in Geology to meet the needs and interests of the students.

Messrs. Stuckey, Parker, West.

HIGHWAY ENGINEERING

Courses for Advanced Undergraduates

H. E. 322, 323. Highway Engineering I. 0-3-3

Prerequisite: C. E. 221, 222, 223.

Required of all juniors in Civil Engineering.

History, economics, and administration of highways; construction and maintenance of highways; field and office methods; grading and drainage. Bruce: *Highway Design and Construction.* Mr. Babcock.

H. E. 332, 333. Materials Testing Laboratory. 0 1-1

Prerequisite: C. E. 321.

Required of all students in Civil Engineering and one term only for juniors in Arch. E. and Cer. E.

The testing of materials used in construction: for the students in General Civil, Sanitary, and Highway Engineering, emphasis placed on those materials used in road construction; for the students in Architectural and Construction Engineering, emphasis placed on those materials used in the building industry. Tucker: *Manual in the Testing of Materials.*

Mr. Babcock.

Courses for Graduates and Advanced Undergraduates

H. E. 421, 422. Highway Engineering II. 3-3-0

Prerequisites: H. E. 322, 323.

Required of seniors in H. E.

Highway administration and finance; the economic location of highways; cost of vehicular operation on grades; the selection of pavements. The administration of city streets; the street system, design, construction and maintenance; types of pavements, materials, and design of surfaces; drainage; traffic regulation and control. Tucker & Leager: *Highway Economics.*

Mr. Babcock.

H. E. 423. Transportation. 0-0-3

Prerequisites: H. E. 322, 323.

Required of seniors in General C. E. and H. E.

The transportation system; development and uses; operation and maintenance; control and methods of taxation. Locklin: *Economics of Transportation.* Mr. Babcock.

H. E. 425, 426. Highway Office Practice and Design. 1-1-0

Prerequisites: H. E. 322, 323.

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. *Lectures and Notes.* Mr. Babcock.

Courses for Graduates Only

H. E. 511, 512, 513. 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; the third term is devoted to original research and investigation.

HISTORY AND POLITICAL SCIENCE

Courses in History

Hist. 101, 102, 103. Economic History. 3-3-3

An examination of the important changes in 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.

Messrs. Barnhardt, Bauerlein, Lockmiller, Seegers.

Hist. 104. World History. 2-2 2

Required of freshmen or sophomores who do not take Miliary Science.

A general survey of Western civilization from its beginning to the present day. Mr. Barnhardt.

Hist. 200, 201, 202. History of the United States. 3 3-3

Elective for one, two, or three terms.

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. Ex. 203. Medieval History. 3 credits

A survey of the political, social, economic, ecclesiastical, and cultural history of Europe from the fourth century to the close of the fifteenth century. Mr. Barnhardt.

Hist. 204. History of Modern Europe. 0-0-3

Elective.

A survey of the economic, political, and social developments in Europe from the age of the great discoveries to the close of the eighteenth century. (Not offered 1942 43.) Mr. Barnhardt.

Hist. 205. History of Modern Europe. 0-0-3

Elective.

A survey of European history during the nineteenth century, political, economic, and social movements being emphasized in proportion to their international or European importance. Mr. Barnhardt.

Hist. 206. Contemporary Europe. 0-0-3

Elective.

A survey of the contemporary history of the principal European states and their international relations in the twentieth century. (Not offered in 1942-43.)

Hist. 303. North Carolina History. 0-3-0

Elective.

A general survey of the political, social, economic, and cultural developments in North Carolina, with special emphasis on the nineteenth and twentieth centuries. Mr. Barnhardt.

Hist. Ex. 307, 308, 309. Economic and Social History of the South. 9 credits

A study of the economic and social history of the Southern States. Lectures, readings, and reports. Mr. Lockmiller.

Hist. Ex. 310. American Biography. 3 credits

Representative men and women in American politics, law, religion, agriculture, industry, commerce, science, literature, and art. Mr. Lockmiller.

Hist. 319. History of American Agriculture. 0-0-3

Required of juniors in Rural Sociology; elective for others.

Main trends in agriculture in the United States, and the place of agriculture in the economic life of the nation; special emphasis on the period since the Civil War. Mr. Seegers.

Hist. Ex. 320. History of Modern England. 3 credits

Survey of English political, social, economic, and diplomatic history, with emphasis on the nineteenth and twentieth centuries. Mr. Barnhardt.

Hist. Ex. 321. The Latin American Republics. 3 credits

Social, economic and political development of Latin America since 1810.

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.

Courses in Political Science

Pol. Sc. 200. American Government. 3 or 3 or 3

Meets School of Engineering Citizenship Requirement; required of juniors in Rural Sociology, and Occupational Information and Guidance; elective for others.

A survey of the origins, structure, and functions of government in the United States, including foreign relations, constitutional decisions, and the New Deal. Mr. Lockmiller.

Pol. Sc. 201. State Government and Administration. 0-3-0

Required of juniors in Rural Sociology and Occupational Information and Guidance; elective for others.

A study of Federal-State relations, and the organization and administration of state and county governments. Special attention will be given to problems of government in North Carolina. Mr. Lockmiller.

Pol. Sc. 202. Municipal Government and Administration. 0-0-3

Required of juniors in Rural Sociology and Occupational Information and Guidance; elective for others.

A study of the history, organization, and administration of American municipal corporations. Lectures, readings, and reports. Mr. Lockmiller.

Pol. Sc. 203. American Political Parties. 3-0-0

Elective.

The origin and development of political parties in the United States: their functions, organization, regulation, campaign methods, and elections. (Not offered in 1942-43.) Mr. Lockmiller.

Pol. Sc. 206. European Governments. 3-0-0

Elective.

A study of the governments of England, France, Germany, Italy, and Russia. Mr. Barnhardt.

HORTICULTURE

Courses for Undergraduates

Hort. 203. 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 the elements of the culture of fruit, vegetable, and flower crops. Messrs. Gardner, Randall, Weaver.

Hort. 301. Plant Propagation and Nursery Practice. 3 or 3 or 3

Required of students majoring in Horticulture; elective for other juniors and seniors in Agriculture and Forestry.

Study of methods and practice in seedage, cuttage, division, budding, and grafting; cultural principles and practices in growing nursery stock.
Messrs. Randall, Weaver.

Hort. 302. Vegetable Forcing. 0-3-0

Prerequisite: Hort. 203.

Required of students majoring in vegetable growing; elective for other juniors and seniors in Agriculture.

Production and management of vegetable crops under glass; practice in growing vegetables under protection. Mr. Randall.

Hort. 303. Vegetable Gardening. 0-0-4

Prerequisite: Hort. 203.

Required of students majoring in vegetable growing and fruit growing; elective for other juniors and seniors in Agriculture.

Location, soil preparation, fertilization, irrigation, and general culture applicable to vegetable production. Messrs. Randall, Weaver.

Hort. 311. Small Fruits and Grapes. 3-0-0

Prerequisite: Hort. 203.

Required of students majoring in fruit growing and vegetable growing; elective for other juniors and seniors in Agriculture.

A course in the culture and production of small fruits, including strawberries, dewberries, blackberries, blueberries, raspberries, and grapes.
Messrs. Gardner, Weaver.

Hort. 312. Floral Design. 0-1-0

Required of students majoring in floriculture; elective for other juniors and seniors in Agriculture.

Principles and practices in the art of floral design; corsages, wreaths, sprays, baskets, and special arrangements. Mr. Weaver.

Hort. 313. Home Floriculture. 0-0-3

Required of students majoring in vegetable growing; elective for other juniors and seniors in Agriculture.

Principles and methods of growing garden flowers and house plants, including varieties and their adaptability. Mr. Randall.

Hort. 321. Fruit and Vegetable Judging. 2-0-0

Prerequisite: Hort. 203.

Elective for juniors and seniors in Agriculture.

Practice in variety identification, and in judging plates, collections, boxes, and commercial exhibits of fruits and vegetables. Messrs. Gardner, Randall.

Hort. 323. Ornamental Horticulture. 0-0-2

Prerequisites: Hort. 301 and L. A. 402.

Elective for juniors and seniors in the School of Agriculture.

The planting, transplanting, pruning, feeding, and protection of ornamental plants used in the construction and maintenance of rural home grounds. Lawn grasses and lawn-making. Mr. Harris.

Hort. 331. Fruit Growing. 4-0-0

Prerequisite: Hort. 203.

Required of students majoring in fruit growing, vegetable growing, poultry, and animal husbandry; elective for other juniors and seniors in Agriculture.

A study of factors underlying fruit production; temperature and moisture relations; culture, fertilization, pruning, fruit setting, yield, and storage. Messrs. Gardner, Schmidt, Weaver.

Hort. 341. Commercial Floriculture. 4-0-0

Prerequisites: Hort. 203, 301.

Required of students majoring in floriculture; elective for other juniors and seniors in Agriculture.

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. 351. Fruit and Vegetable Utilization. 3-0-0

Elective for juniors and seniors in Agriculture.

Principles and methods involved in the commercial utilization of surplus and off-grade products; extraction and preservation of juices; quick-freezing methods; sweet-potato starch production; other manufactured products and by-products. Staff.

Courses for Graduates and Advanced Undergraduates

Hort. 401. Systematic Pomology (offered in alternate years). 2-0-0

Prerequisite: Hort. 331.

Required of students majoring in pomology.

Fruit varieties: their description, identification, nomenclature, and classification; their relationships and adaptations; judging methods and standards. Mr. Gardner.

Hort. 411. Systematic Olericulture (offered in alternate years). 2-0-0

Prerequisite: Hort. 303.

Required of students majoring in vegetable growing.

Vegetable varieties: their description, identification, nomenclature, and classification; their relationships and adaptations. Mr. Randall.

Hort. 412. Experimental Horticulture. 0-3-0

Prerequisites: Hort. 331, 303, 341.

A systematic study of the sources of knowledge and results of experiments in fruit growing, vegetable growing, and floriculture.
Messrs. Gardner, Randall, Weaver.

Hort. 421, 422, 423. Horticultural Problems. 2 2-2

Prerequisite: twelve credit hours in Horticulture.

Required of all students majoring in Horticulture.

Systematic investigation of some phase of horticulture, each student choosing his own subject of study and pursuing it under direction of the instructor. Messrs. Gardner, Randall, Weaver.

Hort. 431, 432, 433. Senior Seminar. 1-1-1

Prerequisite: twelve credit hours in Horticulture.

Required of all students majoring in Horticulture.

A discussion of problems of interest to horticulturists. Discussion topics are assigned to students and members of the Horticultural staff.
Mr. Gardner.

Courses for Graduates Only

Hort. 501, 502, 503. 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. 511, 512, 513. Seminar. 1-1-1

Prerequisite: eighteen credit hours in Horticulture.

Required of graduate students only.

Assignment of scientific articles of interest to horticulturists for review and discussion; student papers and research problems for discussion.
Mr. Gardner.

Hort. 521, 522, 523. 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 fruit growing, vegetable growing, 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, 102, 103. Industrial Organization. 3-3-3

Required of sophomores in I. E.

Engineering methods in studies of industrial enterprises. Kimball: *Industrial Organization.* Mr. Henderson.

I. E. 201, 202, 203. Management Engineering. 3-3-3

Prerequisite: I. E. 103.

Required of juniors in I. E.

Principles of management, administration, production, and sales; executive control, industrial relations, incentives, normal capacities, standard costs, and pricing; budgeting and planning. Gilman: *Analyzing Financial Statements*, and Alford: *Principles of Industrial Management for Engineers.*
Mr. Shaw.

Courses for Advanced Undergraduates

I. E. 301. Engineering Economics. 3 0-0 or 0-0-3

Prerequisite: Econ. 202 or 205.

Required of seniors in E. E., I. E., and in M. E., Furniture Option, elective for others.

Principles of investments, costs, and utility, with applications to engineering practice; choice of investments and replacements. Grant: *Principles of Engineering Economy*, and Problems. Mr. Henderson.

I. E. 312, 313. Industrial Engineering Problems. 0-3-3

Prerequisites or concurrent: I. E. 201, 202, 203.

Required of seniors in I. E.

Detailed study of problems of moment in this rapidly developing field. Mr. Shaw.

I. E. 322. Motion and Time Study. 0-3-0

Required of juniors in I. E., elective for others.

Prerequisite: I. E. 201 or junior standing.

Fundamentals of methods, involving motion and time, to reduce costs by finding "the one best way". Laboratory: Methods analysis, process and other charts, micromotion and timer techniques.

Courses for Graduates and Advanced Undergraduates

I. E. 402. The Electrical Industry. 0-3-0

Prerequisite: I. E. 301.

Required of seniors in E. E. and I. E.

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.

I. E. 412, 413. Engineering Economics Advanced. 0-3-3

Prerequisite: I. E. 301.

Elective.

Comprehensive study of the application of economics to the practice of engineering. Mr. Shaw.

I. E. 421, 422, 423. Public Utilities. 3-3-3

Prerequisite or concurrent: I. E. 301 or senior standing.

Elective for seniors or graduate students.

Public utilities and their regulation; services, rates, rate bases, returns, leading cases; current problems. Thompson and Smith: *Public Utility Economics.* Mr. Shaw.

I. E. 433. Investigation and Report. 0-0-3

Prerequisite: I. E. 312.

Required of seniors in I. E.

Investigation of a selected and approved problem.

Messrs. Shaw, Henderson.

Courses for Graduates Only

I. E. 501, 502, 503. Industrial Engineering Research. 3-3-3

Prerequisite: Graduation in Engineering.

Investigation of a problem of major importance in the field of Industrial Engineering. Mr. Shaw.

LANDSCAPE ARCHITECTURE

Courses for Undergraduates

L. A. 101, 102, 103. Arboriculture. 1-1-2

Required of freshmen in Landscape Architecture; elective for other students in Agriculture.

Culture of plant materials: their planting, transplanting, training, fertilization, protection from pests; tree surgery, lawn making.

Messrs. Pillsbury, Weaver.

Courses for Advanced Undergraduates

L. A. 201, 202, 203. Plant Materials: Woody Plants. 2-2-2

Prerequisite: Bot. 203.

Required of sophomores in Landscape Architecture and juniors in Floriculture; elective for students in other curricula.

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. 212, 213. Theory of Landscape Design. 0-3-3

Required of sophomores in Landscape Architecture; elective for students in other curricula.

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. 303. Plant Materials: Herbaceous Plants. 0-0-2

Required of juniors in Landscape Architecture; elective for students in other curricula. Prerequisite: Bot. 203.

Ornamental perennial and annual plants: height, habit of growth, texture, color, and other characteristics determining use in planting design.
Mr. Randall.

L. A. 311, 312. History of Landscape Design. 3-3-0

Prerequisites: L. A. 212, 213.

Required of juniors in Landscape Architecture.

History of the art of landscape design from antiquity to modern times; sketching from illustrations of design in important periods. Mr. Pillsbury.

L. A. 321, 322, 323. Landscape Design I. 4-4-4

Prerequisites: L. A. 311, 312.

Required of juniors in Landscape Architecture.

Problems in presentation, and in consecutive design of small properties, gardens, and other special areas and suburban estates. Mr. Pillsbury.

L. A. 402. Ornamental Plants. 0-2-0

Prerequisite: Bot. 203.

Required of seniors in Vegetable Gardening and Pomology; elective for juniors or seniors in other curricula.

Ornamental trees, shrubs, and vines: their characteristics used in the design of planting for home, school, church, and community-center grounds, and farmstead landscapes. Mr. Randall.

L. A. 403. Landscape Gardening. 0-0-3

Prerequisites: L. A. 402, or 201, 202, 203.

Required of seniors in Vegetable Gardening, Floriculture, and Pomology; elective for seniors in all other curricula.

Landscape planning and planting design applied to the improvement of home, school, church, community-center grounds, and farmsteads; practice in methods of making measured surveys, mapping, and designing improvements and planting. Mr. Pillsbury.

L. A. 411, 412, 413. Planting Design. 3-3-3

Prerequisites: L. A. 201, 202, 203, and 303.

Required of seniors in Landscape Architecture.

Problems in composition with plant materials, presentation details, the preparation of planting plans, and cost data. Mr. Pillsbury.

L. A. 421, 422, 423. Landscape Design II. 4-4-4

Prerequisites: L. A. 321, 322, 323.

Required of seniors in Landscape Architecture.

Problems in presentation, and in the design of small parks and other public grounds, and institutional groups. Mr. Pillsbury.

L. A. 432. City Planning. 0 3-0

Required of seniors in Landscape Architecture; elective for seniors in all schools.

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. 442. Suburban Design. 0-4-0

Prerequisite: L. A. 321, 322, 323, and 432.

The subdivision of land as related to suburban development and urban growth. Mr. Pillsbury.

L. A. 451, 452, 453. Landscape Construction. 2-2-2

Required of seniors in Landscape Architecture. Prerequisite: C. E. 224, 225, 226, and 227; and L. A. 321, 322, 323.

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. 463. Office Practice. 0-0-1

Prerequisite: L. A. 451, 452, 453.

Arrangement of equipment, supplies, data, and illustrative and other material in landscape offices; methods of professional procedure, and professional ethics. Mr. Pillsbury.

MATHEMATICS

Courses for Undergraduates

***Math. 111. Algebra.** 4-0-0

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, Combination, and the Elementary Theory of Probability. Fisher: *College Algebra.*

Math. 112. Trigonometry. 0-4 0

Prerequisite: Math. 111.

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. Clarkson and Bullock: *Trigonometry.*

***Math. 113. Mathematics of Finance.** 0-0-4

Prerequisite: Math. 112.

Simple and compound interest, annuities, sinking funds and Amortization, and the valuation of bonds and other applications. Smail: *Mathematics of Finance.* Staff.

Math. 101. Algebra for Engineers. 6-0-0

Required of freshmen in the School of Engineering, and in the Departments of Industrial Management, Industrial Arts, and Landscape Architecture.

Quadratic equations, the progressions, the binomial theorem, permutations and combinations, logarithms, the general theory of equations, the solution of higher equations, determinants and partial fractions. Fisher: *College Algebra.* Staff.

***Math. 102. Trigonometry for Engineers.** 0-6-0

Prerequisite: Math. 101.

Required of freshmen in the School of Engineering, and in the Departments of Industrial Management, Industrial Arts, and Landscape Architecture.

---

* This course will be repeated the following term.

The trigonometric functions, derivation of formulae, the solution of plane and spherical triangles, with practical applications, slide rule, complex numbers, and hyperbolic functions. Clarkson and Bullock: *Plane and Spherical Trigonometry.* Staff.

Math. 103. Analytical Geometry. 0 0-6

Prerequisites: Math. 101, 102.

Required of freshmen in the School of Engineering and in the Departments of Industrial Management, Industrial Arts, and Landscape Architecture.

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. Smith, Gale and Neelley: *Elements of Analytical Geometry.* Staff.

Math. 201. Calculus I. 4-0-0

Prerequisite: Math. 103.

Required of sophomores in Engineering.

A course in the fundamental principles of the calculus, including the formulas for differentiation and for integration of polynomial functions, with applications to geometry and to problems in rates, maxima and minima, curve tracing, curvature, areas, volumes, work, pressure, velocity and acceleration. Smith, Salkover, Justice: *Calculus.* Staff.

Math. 202. Calculus II. 0-4-0

Prerequisite: Math. 201.

Required of sophomores in Engineering.

A continuation of Calculus I. Methods of integration, and the study of the definite integral, with applications to problems in areas, volumes, lengths of arcs, surfaces, centroids, moments of inertia, radii of gyration, approximate integration. Smith, Salkover, Justice: *Calculus.* Staff.

Math. 303. Calculus III. 0-0-4

Prerequisite: Math. 202.

Required of sophomores in Engineering.

A continuation of Calculus II. Indeterminate forms, infinite series, expansion of functions, hyperbolic functions, partial differentiation, double and triple integrals, and differential equations. Smith, Salkover, Justice: *Calculus.* Staff.

---

* This course will be repeated the following term.

Courses for Graduates and Advanced Undergraduates

Math. 431-a. Differential Equations. 3-0-0

Prerequisite: Math. 303.

Required of juniors in Electrical Engineering and elective for others.

Solution of standard types of equations; numerous examples in the field of Electrical Engineering. Kells: *Differential Equations.* Mr. Bullock.

Math. 431-b. Differential Equations. 3-0-0

Prerequisite: Math. 303.

Elective. Principally for students in Chemical Engineering.

A study of the equations that occur in Applied Chemistry. Much emphasis on graphic methods and numerical work. Phillips: *Differential Equations.* Mr. Winton.

Math. 432. Advanced Differential Equations for Electrical Engineers. 0-3-0

Prerequisite: Math. 431-a.

Elective.

A continuation of the work given in Math. 431-a. Series solutions, approximate methods, partial differential equations, hyperbolic functions, and other topics will be studied with special emphasis on applications to problems in Electrical Engineering. Students not taking Electrical Engineering may register for the course and will be assigned individual problems in their particular field. Lecture notes. Mr. Bullock.

Math. 402. Graphical and Numerical Methods. 0-3-0

Prerequisite: Math. 303.

Elective.

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. Mackey: *Graphical Solutions.* Mr. Cell.

Math. 403. Vector Analysis I. 0-0-3

Prerequisite: Math. 431 (a or b).

Elective.

Different vector products; the calculus of vectors with applications to geometry and mechanics. Phillips: *Vector Analysis.* Mr. Clarkson.

**Math. 411. Advanced Calculus for Engineers. 3-0-0

Prerequisite: Math. 431 (a or b).

Elective.

Hyperbolic functions, elliptic integrals and functions, partial differentiation of composite functions, differentiation of integrals, implicit functions. Applications to problems in engineering will be emphasized. Reddick and Miller: *Advanced Mathematics for Engineers.* Mr. Levine.

**Math. 412. Advanced Calculus for Engineers. 0-3-0

Prerequisite: Math. 431 (a or b).

Elective.

Power series, Gamma and Bessel functions, functions of a complex variable, line integrals. Applications to problems in engineering will be emphasized. Reddick and Miller: *Advanced Mathematics for Engineers.* Mr. Levine.

**Math. 413. Series for Engineers. 0-0-3

Prerequisite: Math. 431 (a or b).

Elective.

Fourier series, partial differential equations, with applications to problems in physics and engineering. Reddick and Miller: *Advanced Mathematics for Engineers.*

Math. 421. Advanced Analytic Geometry. 3-0-0

Prerequisite: Math. 431 (a or b).

Elective.

The elements of higher plane curves and the geometry of space. Snyder and Sisam: *Analytic Geometry.* Mr. Bullock.

Math. 422. Theory of Equations. 0-3-0

Prerequisite: Math. 431 (a or b).

Elective.

The usual topics in the theory of equations, the solution of higher equations, exponential equations, logarithmic equations, and determinants. Dickson: *First Course in Theory of Equations.* Mr. Mumford.

** Math. 411, 412, 413, may be taken in any order.

Courses for Graduates Only

Math. 501. Applied Mathematics I. 3-0-0

Elective for graduate students only. Prerequisite: Math. 413 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. Lecture notes. Mr. Cell.

Math. 502. Applied Mathematics II. 0-3-0

Prerequisite: Math. 501.

Elective. For graduate students only.

A continuation of Math. 501. Lecture notes. Mr. Cell.

Math. 503. Applied Mathematics III. 0-0-3

Prerequisite: Math. 502.

Elective. For graduate students only.

A continuation of Math. 502. Lecture notes. Mr. Cell.

MECHANICAL ENGINEERING

Courses for Undergraduates

M. E. 101, 102, 103. Engineering Drawing I. 2-2-2

Required of freshmen in Textiles.

Drawing-board work on lettering, projections, sections, pictorial drawings, with working drawings related to textile machinery; tracing and blueprinting. French and Svensen: *Mechanical Drawing*. French and Turnbull: *Lessons in Lettering*.

Messrs. Briggs, Brown, Adams, Hyde, Bragg, and Stinson.

M. E. 105, 106. Engineering Drawing II. 3-3-0

Required of freshmen in Engineering, Agricultural Engineering, and Landscape Architecture.

Drawing-board work on lettering, projections, sections, revolution, auxiliary views, pictorial drawings, intersection, development, working drawings; tracing and blueprinting. French: *Engineering Drawing.*
Messrs. Briggs, Brown, Bragg, Hyde, Neale, Leonard, Stinson, and Adams.

M. E. 107. Descriptive Geometry. 0-0-3

Prerequisite: M. E. 105, 106.

Required of freshmen in Engineering, Agricultural Engineering, and Landscape Architecture.

Representation of geometrical magnitudes with points, lines, planes, and solids; the solutions of problems. Warner: *Applied Descriptive Geometry.*
Messrs. Briggs, Brown, Adams, Bragg, Neal, Leonard, Stinson, and Hyde.

M. E. 121. Woodwork. 1 or 1 or 1

Required of sophomores in Aeronautical and Chemical Engineering, freshmen in Textiles, and juniors in Farm Bus. Adm.

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. Mr. Rowland.

M. E. 122. Foundry. 1 or 1 or 1

Required of sophomores in Aeronautical and Chemical Engineering, freshmen in Textiles, and juniors in Farm Bus. Adm.

Demonstration and practice in molding and core making; cupola practice. Stimpson, Grey and Grennan: *Foundry Work.* Mr. Maddison.

M. E. 123. Forge Work. 1 or 1 or 1

Required of sophomores in Aeronautical and Chemical Engineering, and freshmen in Textiles.

Hand forging of simple exercises in mild steel representative of industrial practice; the origin, purification and fabrication of ferrous metals; the identification and uses of these metals. Coleman: *Forge Note Book.*
Mr. Cope.

M. E. 124. Pattern Making. 2 or 2 or 2

Required of sophomores in Mechanical Engineering and in Industrial Engineering.

Elementary joinery, finishing, theory of dry-kilning, wood-turning; lectures, demonstrations, and practice in hand work and machine methods; typical patterns and core boxes constructed, such as solid, split, and loose piece. Turner and Town: *Pattern Making.* Mr. Rowland.

M. E. 125. Foundry Practice. 2 or 2 or 2

Required of sophomores in Industrial and Mechanical Engineering.

Lectures, demonstrations, and practice in molding and core making, cupola operations; melting and casting of ferrous and nonferrous metals and their alloys; instructions and practice in the testing of molding sands. Wendt: *Foundry Work.* Mr. Maddison.

M. E. 126. Forging and Welding. 2 or 2 or 2

Required of sophomores in Industrial and Mechanical Engineering.

A study of the principles and practices of forging: hand forging as correlated with the industrial processes of hammering, rolling, and pressing. Lectures, demonstrations, and practice in forge, oxy-acetylene, and electric welding. Johnson: *Forging Practice.* Mr. Cope.

M. E. 127. Woodworking. 0-3-0

Required of juniors in Architectural Engineering.

Elementary joinery, cabinet joints, reading blueprints, and wood-turning; theory of dry-kilning and wood finishing. Lectures, demonstrations, and practice in hand and machine methods. Mr. Rowland.

M. E. 128. Forge and Welding Practice. 2 or 2 or 2

Required of sophomores in Electrical Engineering.

Hand forging of exercises in mild and tool steel correlated with the industrial methods of hammering, rolling and pressing; principles and modern practices; identification of ferrous metals; practice in forge, oxy-acetylene and electric welding. Johnson: *Forging Practice.* Mr. Cope.

M. E. 211, 212, 213. Mechanical Drawing. 2-2-2 or 0-2-2

Prerequisites: M. E. 105, 106, 107.

Six credits required of sophomores in Mechanical Engineering, juniors in Industrial Ed., and four credits required of juniors in Ceramic Engineering.

Drawing-board work on machine fastenings, pipe fittings, cam design; technical sketching, applied descriptive geometry, and working drawings; tracing and blueprinting. French: *Engineering Drawing.* Mr. Satterfield.

M. E. 215, 216, 217. Elementary Mechanism. 1-1-1

Prerequisites: M. E. 105, 106, 107.

Required of juniors in Electrical Engineering.

The study of linkages, cams, gears, belting, gear trains, and other simple mechanisms; design and drawings of simple machine parts. Keown and Faires: *Mechanism.* Messrs. Briggs, Adams, and Brown.

M. E. 222, 223. Metallurgy. 0-3-3

Prerequisites: Chem. 101, 102, 103.

Required of juniors in Aeronautical and Mechanical Engineering.

Metals and alloys: smelting, refining, shaping, and heat treating; crystallography of metals. Stoughton and Butts: *Engineering Metallurgy.* Mr. Rowland.

M. E. 224. Factory Equipment. 0-0-3

Prerequisites: M. E. 124, 125, 126.

Required of juniors in Industrial Engineering.

To summarize and coördinate all previous shop courses and show their relation to manufacturing processes; the essential principles of machine-tool operation; machine-tool selection and application for economic production. Roe and Lytle: *Factory Equipment.* Mr. Wheeler.

M. E. 225, 226. Machine Shop I. 1-1-0

Prerequisites: M. E. 121, 122, 123.

Required of juniors in Chemical Engineering.

Practice in chipping, filing, scraping, and babbitting: general machine work, including straight and taper turning, drilling, shaper work, and gear cutting. Mr. Wheeler.

M. E. 227, 228, 229. Machine Shop II. 1-1-1

Prerequisites: M. E. 121, 122, 123, or M. E. 124, 125, 126.

Required of juniors in Industrial and Mechanical Engineering and Yarn Manufacturing.

Practice in 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, index milling and gear cutting. Turner: *Machine Tool Work.* Mr. Wheeler.

M. E. 235, 236. Metal Shop. 3-3-0

Prerequisite: Ed. 106.

Required in Industrial Arts.

Use of hand and machine tools in problems for secondary schools. Kaup: *Machine Shop Practice.* Mr. Wheeler.

M. E. 241, 242, 243. Oxy-Acetylene and Electric Welding. 1-1-1

Prerequisite: M. E. 126 or M. E. 128.

Elective.

Fundamental methods and principles of fusion welding: welding symbols, economic and metallurgical considerations, selection of method and type of welding; emphasis placed on oxy-acetylene welding. Plumley: *Oxy-Acetylene Welding and Cutting.* Mr. Cope.

M. E. 303. Heat Engineering I. 0 0-3

Prerequisites: Phys. 201, 202, 203, Math. 201, 202, 303.

Required of juniors in Civil, Geological, and Highway Engineering.

Measurement of heat, work, and power: fuels and combustion; steam and steam boilers; and boiler-room auxiliaries. Potter and Calderwood: *Elements of Steam and Gas-Power Engineering.* Mr. Cheatham.

M. E. 305, 306. Engineering Thermodynamics I. 3 3-0

Prerequisites: Phys. 201, 202, 203, Math. 303.

Required of juniors in Ceramic Engineering, and seniors in Chemical Engineering.

Measurement of heat, work, and power: fuels and combustion; heat transfer and insulation; elementary thermodynamics of gas and vapor cycles. Severns and Degler: *Steam, Air and Gas Power.* Mr. Lake.

M. E. 307, 308, 309. Engineering Thermodynamics II. 3-3-3

Prerequisites: Phys. 201, 202, 203, Math. 303.

Required of juniors in E. E., M. E., and I. E.

The study of heat as an engineering medium; combustion, heat transfer, and the laws governing energy transformations; use of the general energy equation dealing with gases, vapors, and mixtures; application of fundamental principles to design and performance of nozzles, steam engines and turbines, internal-combustion engines, refrigerating machines, and air compressors. Faires: *Applied Thermodynamics.* Messrs. Hoefer and Rice.

M. E. 311, 312. Mechanical Engineering Laboratory I. 1-1-0

Concurrent with M. E. 305, 306.

Required of juniors in Cer. 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 pumps. Rice: *Experimental Engineering.*

Messrs. Bridges, Cheatham, Rice, and Lake.

M. E. 313, 314, 315. Mechanical Engineering Laboratory II. 1-1-1

Concurrent with M. E. 307, 308, 309.

Required of juniors in Electrical, Industrial and Mechanical Engineering.

Calibrating pressure, temperature, speed, and power-measuring instruments; the testing of fuels, lubricants, pumps, compressors, steam engines and turbines, heating and ventilating equipment, hydraulic machinery, and internal-combustion engines. Rice: *Experimental Engineering.*

Messrs. Bridges, Cheatham, Rice, and Lake.

M. E. 317, 318, 319. Kinematics. 3-3-3

Prerequisites: M. E. 211, 212, 213.

Required of juniors in Mechanical Engineering.

A study of the science of the motion of machine parts, with emphasis on belts, pulleys, cams, gears, chain drives, shafts, and links. Schwamb, Merrill, and James: *Elements of Mechanism.* Mr. Brown.

M. E. 341, 342, 343. Furniture Design. 3-3-3

Prerequisites: M. E. 124, 125, 126 and M. E. 211, 212, 213.

Required of juniors in Mechanical Engineering II.

Principles of elementary freehand design; methods of dry-kilning, finishing, filling and staining. Dean: *Modern American Period Furniture.*

Mr. Rowland.

M. E. 350. Advanced Engineering Drawing. 0-3 or 3

Prerequisites: M. E. 105, 106, 107 and E. M. 311, 312 or M. E. 101, 102, 103 and one of the following: Tex. 304, 310, 335, 381.

Elective: For advanced undergraduates.

Drawing-board work as related to special problems in the various engineering and textile fields. The course will also include lectures, recitations, and individual conferences.

Mimeographed problem sheets and handbooks will be used.

Messrs. Briggs and Brown.

Courses for Graduates and Advanced Undergraduates

M. E. 401, 402, 403. Power Plants. 3-3-3

Prerequisites: M. E. 307, 308, 309 and M. E. 313, 314, 315.

Required of seniors in Mechanical Engineering.

Fuels and combustion; heat balance, steam boilers, prime movers, and auxiliaries, as applied to power generation. Morse: *Power Plant Engineering and Design.* Mr. Vaughan.

M. E. 404. Heating and Air-Conditioning I. 0-3-0

Prerequisites: M. E. 307, 308, 309.

Required of seniors in Mechanical Engineering I.

Principles of heating and ventilation; warm air, steam, and hot-water heating systems; air-conditioning. Severns: *Heating, Ventilating, and Air-Conditioning Fundamentals.* Mr. Vaughan.

M. E. 405. Refrigeration. 0-0-3

Prerequisites: M. E. 307, 308, 309.

Required of seniors in Mechanical Engineering I.

Theory of refrigeration; types of ice-making and refrigerating machinery; cooling for air conditioning; installation, management, and cost of operation. Sparks: *Mechanical Refrigeration.* Mr. Vaughan.

M. E. 407, 408, 409. Mechanical Engineering Laboratory III. 1-1-1

Prerequisites: M. E. 313, 314, 315.

Required of seniors in Mechanical Engineering.

Advanced study and tests in the fields of power plants, air-cooled and liquid cooled internal combustion engines, heating and ventilation, metallurgy, fluid flow, compressed air, fuels and combustion, and lubrication. Rice: *Experimental Engineering.*

Messrs. Bridges, Cheatham, Rice, and Lake.

M. E. 411, 412, 413. Machine Design. 3 3-3

Prerequisites: M. E. 317, 318, 319, E. M. 213, E. M. 222.

Required of seniors in Mechanical Engineering I.

Application of mechanics, kinematics, strength of materials, and metallurgy to the design of machinery; determination of proper materials, shape, size, and strength of various machine parts. Vallance: *Design of Machine Members.* Mr. Hoefer.

M. E. 421, 422, 423. Internal-Combustion Engines. 3-3-3

Prerequisites: M. E. 307, 308, 309.

Required of seniors in Aeronautical Engineering.

Thermal and mechanical characteristics of internal-combustion engines; with special reference to the design, construction, operation and performance of automotive, aircraft and Diesel engines and their accessories. Lichty, *Internal Combustion Engines;* current periodicals. Mr. Rice.

M. E. 425, 426, 427. Internal Combustion Engines Laboratory. 1-1-1

Prerequisites: M. E. 307, 308, 309.

Concurrent with M. E. 401, 402, 403 or M. E. 421, 422, 423.

Advanced study and testing of internal-combustion engines, their auxiliaries, and the materials used in their construction; fuels and lubricants. Rice: *Experimental Engineering.* Messrs. Bridges and Rice.

M. E. 445, 446, 447. Furniture Construction. 3-4-5

Prerequisites: M. E. 341, 342, 343.

Required of seniors in Mechanical Engineering II.

Theory and practice in construction and finishing; factory processes and layout for quantity production. Dean: *Modern American Period Furniture.* Mr. Rowland.

M. E. 451, 452, 453. Heating and Air-Conditioning II. 3-3-3

Prerequisites: M. E. 307, 308, 309 and M. E. 313, 314, 315.

Required of seniors in Mechanical Engineering III.

Principles of heating, ventilation, and refrigeration as applied to air-conditioning; design and operation of air-conditioning systems. Allen and Walker: *Heating and Air-Conditioning.* Messrs. Rice and Vaughan.

M. E. 455, 456, 457. Heating and Air-Conditioning Lab. 1-1-1

Prerequisites: M. E. 313, 314, 315.

Required of seniors in Mechanical Engineering III.

Testing heating and air-conditioning units, systems and controls; testing refrigerating equipment, ducts, methods of air-distribution, fuel-burning equipment, dust-control equipment, heat-resisting materials. *American Society of Heating and Ventilating Engineers' Guide.* Mr. Rice.

M. E. 458, 459. Heating and Air-Conditioning Design. 0-3-3

Prerequisites: M. E. 307, 308, 309 and M. E. 313, 314, 315.

Required of seniors in Mechanical Engineering III.

Design calculations from given conditions for a heating plant and an air-conditioning system; materials listed and cost of installation estimated. *American Society of Heating and Ventilating Engineers' Guide.*

Messrs. Rice and Vaughan.

M. E. 461, 462, 463. Experimental Engineering. 3-3-3

Prerequisites: M. E. 313, 314, 315 or equivalent as approved by faculty group.

Advanced engineering principles applied to a specific project dealing with heat, power, hydraulic machinery, metallography, aerodynamics, or general experimental work. A seminar period provided, and a written report required. Messrs. Rice, Vaughan, and Wheeler.

Courses for Graduates Only

M. E. 501, 502, 503. Advanced Engineering Thermodynamics. 3-3-3

Prerequisites: M. E. 307, 308, 309 and M. E. 407, 408, 409.

Development of the thermodynamic equations and their application to advanced engineering problems. Messrs. Hoefer and Rice.

M. E. 505, 506, 507. Internal-Combustion Engine Design. 3-3-3

Prerequisites: M. E. 421, 422, 423 and 407, 408, 409.

A thorough study of the field of internal-combustion engines; design of an engine to meet specific requirements. Pye: *Internal-Combustion Engines* Vol. I and II. Mr. Rice.

***M. E. 513, 514, 515. Power Plant Design.** 3-3-3

Prerequisites: M. E. 401, 402, 403 and M. E. 307, 308, 309.

The design of a plant to fulfill conditions obtained by investigation and research; specifications for design and installation.

Messrs. Hoefer and Vaughan.

***M. E. 517, 518, 519. Design of Heating and Ventilating System.** 3-3-3

Prerequisites: M. E. 404 or M. E. 451, 452, 453 and M. E. 407, 408, 409.

The design of a heating system for specific conditions; specifications for installation; performance tests of heating equipment.

Messrs. Rice and Vaughan.

---

* Only one of these courses to be offered during any College year.

M. E. 521, 522, 523. Mechanical Engineering Research. 3 3-3

Prerequisites: M. E. 401, 402, 403 and M. E. 404.

Research and thesis in connection with M. E. 513, 514, 515 or M. E. 517, 518, 519 or M. E. 505, 506, 507. Messrs. Rice, Vaughan.

MILITARY SCIENCE AND TACTICS

Mil. 101, 102, 103. 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; Obligations of Citizenship.

Mil. 201, 202, 203. 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 Platoon; Interior Guard Duty and Military History.

Mil. 301, 302, 303. Military Science III. 3-3-3

Prerequisite: M. S. II.

This, the first-year advanced course, is elective for selected juniors.

Aerial Photograph Reading; Leadership; Machine Gun, 37 MM. Gun, Three-inch Trench Mortar; Combat Principles; Supply and Mess Management; Field Fortifications; Care and Operation of Motor Vehicles; Defense Against Chemical Warfare.

Mil. 401, 402, 403. Military Science IV. 3 3-3

Prerequisite: M. S. III.

This, the second year advanced course, is required of all seniors who have completed the first-year advanced course.

Military Law; Officers Reserve Corps Regulations; Military History and Policy; Anti-Aircraft Defense; Leadership; Combat Principles of the Rifle Company; Heavy Weapons Company; Tanks and Mechanization; Combat Intelligence; and Signal Communications.

Credit will be given for work at other institutions maintaining a *Senior* unit of the Reserve Officers Training Corps as shown by the student's record, Form 131 A. G. O., evaluated and kept by the Professor of Military Science and Tactics.

MODERN LANGUAGES

Basic Courses

French

***M. L. 101, 102. Elementary French.** 3-3-0

Lectures on the structure, diction, pronunciation; and other matters of technique of the language, supplemented by easy readings and translations. Individual reports and conferences. No previous training in the language necessary. Messrs. Ballenger and Garodnick.

***M. L. 201. Elementary French Prose.** 0-0-3

Prerequisites: M. L. 101, 102 or equivalent.

Reading and translation of easy French; lectures on structure of the language, diction, and pronunciation; choice in parallel reading material, a matter of individual need. Individual reports and conferences.
Messrs. Ballenger and Garodnick.

M. L. 202. Intermediate French Prose. 3-0-0

Prerequisite: M. L. 201 or equivalent.

A study of prose reading material, largely historical in nature. Attention given to the acquisition and extension of the student's basic vocabulary. Individual translation, parallel readings, and reports. Mr. Ballenger.

German

***M. L. 103, 104. Elementary German.** 3-3-0

Lectures on the structure and technique of the language, supplemented by easy readings and translations. Individual reports and conferences. No previous training in the language necessary.
Messrs. Hinkle and Garodnick.

***M. L. 203. Elementary German Prose.** 0-0-3

Prerequisites: M. L. 103, 104 or equivalent.

Reading and translation of easy German, supplemented with lectures on the structure and idiom of the language. The student's choice of parallel reading material, a matter of individual need. Individual reports and conferences. Mr. Hinkle.

---

* Two years of high-school work will ordinarily be considered the equivalent of M. L. 101, 102, and 201; and of 103, 104, and 203.

M. L. 204. Intermediate German Prose. 3-0-0

Prerequisite: M. L. 203 or equivalent.

A study of prose reading material, largely historical in nature. Attention given to the acquisition and extension of the student's basic vocabulary. Individual translations, parallel readings, and reports. Mr. Hinkle.

Spanish

***M. L. 105, 106. Elementary Spanish.** 3-3-0

Lectures on the structure, diction, pronunciation, and other matters of technique of the language, supplemented by easy readings and translations. Individual reports and conferences. No previous training in the language necessary. Messrs. Ballenger and Garodnick.

***M. L. 205. Elementary Spanish Prose.** 0-0-3

Prerequisites: M. L. 105, 106, or equivalent.

Reading and translation of easy Spanish; lectures on the structure of the language, diction and pronunciation. The student's choice of parallel reading material, a matter of individual need. Individual reports and conferences. Messrs. Ballenger and Garodnick.

M. L. 206. Intermediate Spanish Prose. 3-0-0

Prerequisite: M. L. 205 or equivalent.

A study of prose reading material, largely historical in nature. Attention given to the acquisition and extension of the student's basic vocabulary. Individual translations, parallel readings, and reports. Mr. Ballenger.

**Technical and Scientific Courses

M. L. 301. Technical French. 0-3-0

Prerequisite: M. L. 202 or equivalent.

Readings and translations of relatively simple technical material, supplemented by lectures on terminology, vocabulary analysis, and other linguistic technique. Designed to meet the needs of students whose interest in the language is primarily that of reading ability. Choice of reading material adjusted to individual needs; may be taken by students of varying degrees of previous linquistic training. Mr. Ballenger.

---

* Two years of high-school work will ordinarily be considered the equivalent of M. L. 105, 106, and 205.

** Students registered in advanced technical and scientific courses are given the opportunity of doing a translation project in connection with the Translation Service of the department. When such propect is satisfactorily completed and accepted, it may be substituted in lieu of an examination as evidence of reading ability. This procedure is recommended as the preferable method of preparation for the acquisition of a reading knowledge of the language concerned.

M. L. 302. Introductory Scientific French. 0-0 3

Prerequisite: M. L. 202 or equivalent.

A study of scientific French of intermediate difficulty, supplemented with lectures on terminology and other linquistic technique. The needs of students whose interest is that of the acquisition of a reading knowledge of the language, constantly kept in view. Basic technique of translation explained and demonstrated by means of personal conferences.

Messrs. Ballenger and Garodnick.

M. L. 401, 402, 403. Advanced Scientific French. 3-3-3

Prerequisite: M. L. 301 or 302 or equivalent.

A study of scientific literature appearing in current bulletins, magazines and technical journals. Students given the opportunity of working a translation project in connection with their subject of major interest. Special attention given to the comprehension of the thought of the article under consideration and its accurate rendition into English. Parallel readings, reports and conferences. Messrs. Hinkle and Ballenger.

M. L. 303. Technical German. 0-3 0

Prerequisite: M. L. 204 or equivalent.

Reading and translations of relatively simple technical German, supplemented by lectures on terminology, word order, vocabulary analysis and other linguistic technique. Designed to meet the needs of students whose interest in the language is primarily that of reading ability. Choice of reading material adjusted to individual needs; may be taken by students of varying degrees of previous linguistic training. Mr. Hinkle.

M. L. 304. Introductory Scientific German. 0-0-3

A study of scientific German of intermediate difficulty supplemented with lectures on terminology and other linguistic technique. The needs of students whose interest is that of the acquisition of a reading knowledge of the language, constantly kept in view. Basic technique of translation explained and demonstrated by means of personal conferences.

Messrs. Hinkle and Garodnick.

M. L. 404, 405, 406. Advanced Scientific German. 3-3 3

Prerequisite: M. L. 303 or 304 or equivalent.

A study of scientific literature appearing in current bulletins, magazines, and technical journals. Students given the opportunity of working a translation project in connection with their subject of major interest. Special attention given to the comprehension of the thought of the article under consideration and its accurate rendition into English. Parallel readings, reports, and conferences. Messrs. Hinkle and Garodnick.

M. L. 305. Technical and Industrial Spanish. 0-3-0

Prerequisite: M. L. 206 or equivalent.

A study of technical and industrial literature. Particular attention given to the special terminology characteristic of such literature with a view to the acquisition of a practical vocabulary. Individual conferences and reports. Mr. Ballenger.

M. L. 306. Introductory Scientific Spanish. 0-0-3

Prerequisite: M. L. 206 or equivalent.

Readings and translations of relatively simple scientific Spanish, supplemented by lectures on terminology, vocabulary analysis, and other linguistic technique. Designed to meet the needs of students whose interest in the language is primarily that of reading ability. Choice of reading material adjusted to individual needs; may be taken by students of varying degrees of previous linguistic training. Mr. Ballenger.

M. L. 407, 408, 409. Advanced Scientific Spanish. 3-3-3

Prerequisite: M. L. 305 or 306 or equivalent.

A study of scientific literature appearing in current bulletins, magazines, and technical journals. Students given the opportunity of working a translation project in connection with their subject of major interest. Special attention given to the comprehension of the thought of the article under consideration and its accurate rendition into English. Parallel readings, reports, and conferences. Messrs. Ballenger and Garodnick.

General Courses

M. L. 410. Masterpieces of French Literature. 3-0-0

Prerequisite: Junior or Senior Standing.

The study of outstanding masterpieces of French literature. A brief outline of French literary development. Parallel reading either in translation or in French. An open elective. No language prerequisites.
Mr. Hinkle.

M. L. 411. Masterpieces of German Literature. 0-3-0

Prerequisite: Junior or Senior Standing.

The study of outstanding masterpieces of German literature. A brief outline of German literary development. Parallel readings either in translation or in German. An open elective. No language prerequisites.
Mr. Hinkle.

M. L. 412, 413. Masterpieces of Spanish Literature. 0-3-3

Prerequisite: Junior or Senior Standing.

The study of outstanding masterpieces of Spanish literature. A brief outline of Spanish literary development. Parallel readings either in translation or in Spanish. An open elective. No language prerequisites.

Mr. Hinkle.

M. L. 414, 415. French, German and Spanish Civilization. 3-0 3

Prerequisite: Junior or Senior Standing.

Lectures and reports on the manners and customs of the respective cultures under consideration. Fall Term devoted to their development in Europe; Spring Term devoted to Latin America. Topics, such as racial stocks, people, social classes, governments, politics and education given special consideration. Parallel readings, reports, and conferences. An open elective. No language prerequisites. Mr. Hinkle.

M. L. 416. The Development of Language. 0-3-0

Prerequisite: Junior or Senior Standing.

The various phases of linguistic growth as a basis for intelligent language appreciation. Origin of language, linguistic change, grammatical categories, dialects, standard language, word order, inflection, isolation, agglutination, etymology, and other linguistic processes given special consideration. Parallel readings, reports, and conferences. An open elective. No language prerequisites. Mr. Hinkle.

M. L. 417. Masterpieces of Foreign Literature. 0-0-3

Prerequisite: Junior or Senior Standing.

A study of outstanding literary productions in each of the various types of literature, and lectures on their cultural background. Designed primarily to meet the needs of students who wish to supplement their knowledge of their own literature with a survey of the literature of other civilizations. Special attention is given to the literary monuments of France, Germany, Spain, and Italy. No foreign language prerequisites are necessary. Daily reports and conferences. Mr. Hinkle.

PHYSICAL EDUCATION AND ATHLETICS

Courses and Activities

P. E. 101, 102, 103. Fundamental Activities and Hygiene. 1-1-1

Required of all freshmen except those excused on the recommendation of the College physician.

Individual health and physical efficiency of each student based on standardized athletic, gymnastic, and efficiency tests. Lectures on personal hygiene required in one term only. Mr. Miller and Staff.

P. E. 201, 202, 203. Sports Activities. 1 1-1

Prerequisites: P. E. 101, 102, 103.

Required of all sophomores except those excused upon recommendation of the College physician.

Election is permitted in popular sports for healthful exercise and a fair degree of skill in them. Mr. Miller and Staff.

P. E. 111, 112, 113. Restricted Activities. 1 1-1

Required of all freshmen excused from P. E. 101, 102, 103.

Special activities for those students who cannot meet the requirements of the regular course because of physical handicap. Mr. Miller and Staff.

P. E. 211, 212, 213. Restricted Activities. 1-1-1

Required of all sophomores excused from P. E. 201, 202, 203.

Special activities for those students who cannot meet the requirements of the regular course because of physical handicap. Mr. Miller and Staff.

P. E. 301, 302, 303. Theory and Practice of First Aid. 1 or 1 or 1

Elective for juniors and seniors.

Hours by arrangement.

Anatomy and physiology sufficiently to proceed with bandages, dressings, wounds, shock, injuries to bones, joints, muscles, poisons, unconsciousness, artificial respiration, and common emergencies. Students completing the course are awarded the American Red Cross Certificate.

Messrs. Warren, Winkler, Bartlett.

P. E. 401. Social Recreation. 0 0-3

Elective for juniors and seniors in Agr. Educ.

Purpose: To prepare teachers of agriculture to assume leadership in social and recreational activities. The organization, supervision, and practice work in athletic and social activities for parties, picnics, campus banquets, and similar occasions. Mr. Miller.

PHYSICS

Courses for Undergraduates

Phys. 102. Physics Survey. 0-3-0

An introductory survey of physical phenomena, with the scientific method developed and conclusion drawn therefrom. Mr. Heck.

Phys. 105, 106, 107. General Physics. 4-4-4

A survey of the phenomena, laws, and devices of modern physical science. Taylor: *Physics.* Messrs. Stainback and Bartlett.

Phys. 111, 112, 113. Physics for Textile Students. 4-4-4

Required of freshmen in Textiles.

Industrial Physics, with emphasis on practical applications to the textile industry. Black: *College Physics.*

Messrs. Meares, Lancaster, Bessey, Hopkins.

Phys. 115. Physics for Agricultural Students. 5 or 5 or 5

Required of sophomores in Agriculture.

Elements of machines; physics of heat and weather; applications of light and electricity on the farm. Henderson: *The New Physics of Everyday Life.*

Messrs. Heck, Stainback, Bartlett.

Phys. 123. Descriptive Astronomy. 0-0-3

Elective.

An elementary nonmathematical survey of the sun, planets, and stars; observations with telescope. Baker: *Introduction to Astronomy.* Mr. Heck.

Phys. 201, 202, 203. Physics for Engineers. 4-4-4

Prerequisite: Math. 103.

Required of sophomores in Engineering.

General Physics, with emphasis on problems and engineering applications. Hausman and Slack: *Physics.*

Messrs. Heck, Derieux, Meares, Lancaster, Stainback, Bartlett, Hopkins, Bessey, Parker.

Phys. 205, 206, 207. Physics for General Engineering. 5 5-5

Prerequisite: Math. 103.

Required of sophomores in General Engineering.

Similar to Physics for Engineers, but including broader development and more applications. Messrs. Bartlett and Bessey.

Phys. 306. Electron Tubes and Their Application to Industry. 0-0-3

Prerequisites: Phys. 113 or 203. Math. 103.

Elective.

Properties of electrons and electron emitters; gaseous conduction; thermionic and photoelectric tubes, theory and applications. Mr. Stainback.

Phys. 311. Light in Industry. 3 0-0 or 0-0-3

Prerequisite: Phys. 113 or Equivalent.

Required of Textile students; elective for other students.

Fundamentals of light, illumination, and color; psychology of color; standardized color theory; pigments, contrast, and harmony.

Text: *Light and Color in Industry.* Mr. Lancaster.

Phys. 322. Meteorology. 0-3-0

Required of juniors in Forestry; elective for other students.

Causes of weather change; methods of forecasting; peculiarities of the weather of North Carolina. Blair: *Weather Elements.* Mr. Heck.

Phys. 332. Photography. 3 or 3 or 3

Prerequisite: Phys. 113 or equivalent.

Elective.

A general study of cameras, lenses, exposure, development, printing, types of emulsion, color sensitivity and color filters. Boucher: *Fundamentals of Photography.* Messrs. Meares, Bartlett.

Phys. 402, 403. Mechanics. 0-3-3 or 0-4-4

Prerequisites: Phys. 203. Math. 303.

Elective.

The physical principles of mechanics. Edser: *Physics for Students.* Mr. Meares.

Phys. 405, 406. Electricity and Magnetism. 3-3-0 or 4-4-0

Prerequisites: Phys. 203. Math. 303.

Elective.

Fundamental principles in a more specialized but intermediate manner. Laboratory, if taken, increases the course to 4 credits. Gilbert: *Electricity and Magnetism.* Mr. Lancaster.

Phys. 407. Elementary Modern Physics. 3 or 3 or 3

Prerequisites: Phys. 203, Math. 303, Chem. 211.

Required of juniors in E. E. and seniors in Ch. E.

New theories and discoveries in Physics, such as: the electron, atomic structure, spectra, X-rays, crystal structure, quantum theory, radiation, radio-activity, isotopes and cosmic rays. Brown: *Foundations of Modern Physics.* Mr. Derieux.

Phys. 413. Acoustics. 0-3-0

Prerequisites: Phys. 203. Math. 303.

Elective.

Production, propagation, transmission, and reception of sound, with special applications to architectural and electrical transmission problems. Olson: *Elements of Acoustical Engineering.* Mr. Bartlett.

Phys. 415, 416. Light. 0-3-3 or 0-4-4

Prerequisites: Phys. 203 or 207. Math. 303.

Elective.

Introduction to principles of geometrical and physical optics. Edser: *Light for Students.* Mr. Derieux.

Phys. 417. Heat. 3-0-0

Prerequisites: Phys. 203 or 207. Math. 303.

Elective.

Temperature measurement,, specific heats, thermal expansion, conduction, radiation, kinetic theory, change of state, thermodynamics, low temperatures, high temperatures. Cork: *Heat.* Mr. Bartlett.

Phys. 426. Spectroscopy in Industry. 0-3-0 or 0-4-0

Prerequisites: Phys. 203. Chem. 212.

Fundamental principles of light; spectroscopic equipment; spectra; qualitative analysis of composition by emission spectra; detection of impurities; quantitative analysis; absorption spectra; industrial applications, lectures, demonstrations, and laboratory. Lewis: *Spectroscopy in Science and Industry;* Brode: *Chemical Spectroscopy.* Mr. Derieux.

Phys. 427. Geometrical Optics. 3-0-0

Prerequisites: Phys. 203. Math. 303.

Curved mirrors, prisms, lenses, lens systems, the eye, spectacles, microscope, telescope and other optical instruments. Houston: *A Treatise on Light.* Mr. Derieux.

Phys. 428, 429. Physical Optics. 0-3-3

Prerequisites: Phys. 203. Math. 303.

Wave theory of light, spectra, absorption, interference, interferometers, diffraction, gratings, polarization and saccharimetry. Houston: *A Treatise on Light.* Mr. Derieux.

Phys. 438, 439. Experimental Optics. 0-2-2

Prerequisites: Phys. 203. Math. 303.

Laboratory work with the photometer, spectrometer, gratings, Fresnel biprism and mirors, polarimeter, saccharimeter, and interferometer. Mann: *Manual of Optics.* Mr. Derieux.

Phys. 443. History of Physics. 0-0-3

Prerequisite: One course in College Physics.

Elective.

Development of Physics from its beginnings to the present time. Crew: *Rise of Modern Physics.* Mr. Heck.

Phys. 445, 446, 447. Research. 3-3-3

Prerequisite: Phys. 203 or 207 or 213.

Elective.

Undergraduate research given according to the student's ability.
Mr. Heck.

Phys. 451, 452, 453. Physics Colloquium.

Current research reviewed by department and advanced students; meets weekly at night throughout the year. Mr. Heck.

Phys. 463. Industrial X-Rays. 0 0-3

Prerequisites: Phys. 203. Math. 303.

Theory and practice of X-rays in industry, such as X-ray equipment; photographic procedure; detection of defects in welds, castings, assemblies, stresses in members and fibers and crystal analysis demonstrations and student manipulation in each phase. Clark: *Applied X-rays.* St. John: *Industrial Radiography.* Staff.

Phys. 514, 515, 517. Advanced Theory of Electricity and Magnetism. 3-3-3

Prerequisites: Phys. 203. Math. 301.

Theorem of Gauss, energy in media, boundary conditions, condensers, electrometers, dielectric constants, migration of ions, thermodynamics of reversible cells, thermoelectricity, galvanometers, magnetic circuits, growth and decay of currents, oscillatory discharge, and alternating currents. Starling: *Advanced Theory of Electricity and Magnetism.* Staff.

Phys. 522. Discharge of Electricity in Gases. 0-3-0

Prerequisites: Phys. 213. 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. Crowther: *Ions, Electrons, and Ionizing Radiations.* Mr. Derieux.

Phys. 525. Atomic Structures. 3-0-0

Prerequisite: Phys. 312.

Elective.

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. White: *Atomic Spectra.* Haas: *Atomic Structures.* Staff.

Phys. 531, 532, 533. Research. 3-3-3

Graduate students sufficiently prepared may undertake research in some particular field of Physics. At least six laboratory hours a week must be devoted to such research. Messrs. Heck and Derieux.

POULTRY

Courses for Undergraduates.

Poul. 201. General Poultry. 3-0-0

Required of sophomores in Agriculture.

Fundamental principles of poultry production.

Messrs. Williams and Dearstyne.

Poul. 301. Poultry Judging. 4-0-0

Prerequisite: Poul. 201.

Required of juniors in Poultry Production; elective for others.

Mr. Williams.

Poul. 303. Incubation and Brooding. 0-0-3

Prerequisites: Phys. 115. Poul. 201.

Required of juniors in Poultry Production; elective for others.

Principles of incubation and brooding; feeding, housing, and rearing baby chicks. Mr. Williams.

Poul. 311, 312. Poultry Anatomy and Physiology. 3-3-0

Required of juniors in Poultry Science; elective for others.

A foundation for courses in poultry diseases and nutrition.

Mr. Gregory.

Poul. 322. Poultry Production. 0-4-0

Prerequisite: Poul. 201.

Developed for vocational teachers of agriculture. Elective for others.

Poultry disease problems; nutritional problems; judging methods.

Messrs. Dearstyne and Williams.

Poul. 332. Preparation and Grading of Poultry Products. 0-3 0

Prerequisite: Poul. 201.

Required of juniors in Poultry; elective for others.

Commercial fattening; grading and marketing eggs; refrigerating and storage; markets. Mr. Williams.

Poul. 333. Poultry Nutrition. 0-0-4

Prerequisites: Chem. 101. Zool. 101 and 102. Poul. 201.

Required of juniors in Poultry Production; elective for juniors in Agriculture.

Feeds and feeding: Physiology of digestion, absorption, and elimination; mineral and vitamin requirements. Messrs. Dearstyne and Gregory.

Poul. 342. Turkey Production. 0-3-0

Prerequisites: Poul. 101. Zool. 411.

Required of seniors in Poultry Science; elective for others.

Selection and mating; incubation: brooding poults; nutrition; grading and marketing. Mr. Nesbit.

Courses for Advanced Undergraduates

Poul. 401, 402. Poultry Diseases. 4-4-0

Prerequisites: Poul. 201. Zool. 102. Poul. 401 prerequisite to Poul. 402.

Required of seniors in Poultry Science; elective for others.

Sanitation, parasite infestations and control, contagious and noncontagious diseases. Mr. Gauger.

Poul. 403. Sero-Diagnosis in Poultry Diseases. 0-0-3

Prerequisites: Poul. 401, 402. Bot. 402.

Required of seniors in Poultry Science.

Basic immunological theory and technique; its application in the therapy and diagnosis of poultry diseases.

Poul. 412. Commercial Poultry Plant Management. 0-3-0

Prerequisite: Poul. 201.

Required of seniors in Poultry Science; elective for others.

Development and maintenance of a commercial plant; custom hatching, and commercial incubation; cost of production. Mr. Williams.

Poul. 413. Selection and Mating of Poultry. 0-0-3

Prerequisites: Poul. 201. Genetics, Zool. 411.

Required of seniors in Poultry Production, elective for juniors in Agriculture.

Methods of recognition and selection for mating from both standard and utility standpoints; study of progeny performance. Mr. Dearstyne.

Poul. 423. Senior Seminar. 0-0-3

Required of seniors in Poultry. Mr. Dearstyne.

Courses for Graduates Only

Poul. 501, 502, 503. Poultry Histology. 3-3-3

Prerequisites: Poul. 311, 312, 401, 402. Zool. 461.

General histology of the tissues, special histology of the various systems of the body. Mr. Gregory.

Poul. 511, 512, 513. Poultry Pathology. 3-3-3

Prerequisites: Poul. 311, 312, 401, 501, 502, 503.

Various disease processes. Mr. Gregory.

Poul. 521. Poultry Physiology. 3-0-0

Prerequisites: Poul. 311, 312, 401, 402, 501, 502.

Histology and pathology, emphasizing the effects of diseases on normal physiology. Mr. Gregory.

Poul. 531, 532, 533. Poultry Research. 3-3-3

Prerequisite: Eighteen term credits in Poultry.

Problems in Poultry nutrition, diseases, marketing, and breeding to be conducted as definitely outlined basis by the Department. Poultry Staff.

Poul. 541, 542, 543. Seminar. 3-3-3

Prerequisite: Eighteen credit hours in Poultry. Mr. Dearstyne.

Poul. 551, 552, 553. Production Studies and Experiments. 3-3-3

Prerequisites: Poul. 201, 333, 401, 402.

Problems in poultry nutrition, and breeding, and in commercial poultry production and marketing. Mr. Dearstyne.

PSYCHOLOGY

Courses for Undergraduates

Psychol. 200. Introduction to Psychology. 3 or 3 or 3

A study of the general characteristics and development of human behavior, emphasizing the problems of motivation, emotion, learning, and thinking. Mr. Moffie.

Psychol. 201. Elementary Experimental Psychology. 3-0 0

Introduction to experimental psychology. One lecture and two laboratory periods per week. Mr. Moffie.

Psychol. 202. Psychology of Personality and Adjustment. 0-3-0

Prerequisite: Psychology 200.

A study of the factors involved in the development of the normal personality. Mr. Moffie.

Psychol. 303, 304. Educational Psychology. 3-3-0

Required of students in Education; elective for others.

Applications of psychology to education; problems of learning, motivation, interests; the measurement of educational efficiency; mental hygiene. Mr. McGehee.

Psychol. 337. Applied Psychology. 0-3-0 or 0-0-3

Prerequisite: Psychology 200.

The practical application of psychological principles in special fields: analysis of problems arising in business, professional, and everyday life; the psychological aspects of personnel selection. Mr. Moffie.

Psychol. 338. Industrial Psychology. 0 3-0 or 0-0-3

Prerequisite: Psychology 200.

The application of psychological principles to the problems of modern industry; factors involved in industrial learning, methods of work, monotony, fatigue, illumination, accidents, morale of workers. Mr. McGehee.

Psychol. 390. Social Psychology. 0-0-3

Prerequisite: Psychology 200.

Social applications of psychology: social stimulation, response, and attitudes. Mr. McGehee.

Courses for Advanced Undergraduates and Graduates

Psychol. 411. Rural Social Psychology. 3-0-0

For description of this course, see Rural Sociology 411. Mr. McGehee.

Psychol. 470, 471, 472. Psychodiagnostic Techniques. 3-3-3

Prerequisite: Six hours in Psychology.

Techniques of measuring intelligence, personality, aptitudes, and achievement. Practice in administration and interpretation of psychological tests. Messrs. McGehee, Moffie.

Psychol. 476. Psychology of Adolescence. 0 0-3

Prerequisites: Ed. 303, 304, or six credits in Psychology.

Mental growth, social development, and interests of adolescent boys and girls. Mr. McGehee.

Psychol. 478. Individual Differences. 0-3-0

Prerequisite: Six hours in Psychology.

Nature, extent, and practical implications of individual differences and individual variation. Mr. McGehee.

Courses for Graduates Only

Psychol. 512, 513, 514. Problems in Applied Psychology. 3-3-3

Prerequisite: Twelve hours in Psychology.

Individual and group research problems in educational, industrial, and social psychology. Messrs. McGehee, Moffie.

RELIGION

(See Ethics, page 241)

RURAL SOCIOLOGY

Courses for Undergraduates

Rural Soc. 302. Rural Sociology. 3 or 3 or 3

Prerequisites: Soc. 202, 203 or Econ. 201, 202, 203.

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. Staff.

Courses for Graduates and Advanced Undergraduates

Rural Soc. 402. Farmers' Movements. 0-3-0

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 Nonpartisan League, the Farm Bureau, the Farm-Labor Union, the Coöperative Marketing Movement. Mr. Seegers.

Rural Soc. 403. Rural Leadership. 0-0-3

Social role of leadership; types and numbers of leaders; sources and backgrounds; motivation and personal traits; experience, training, and education; how leaders gain and hold power; adjustment of leadership to the changing environment; biographies of different types of leaders; and new opportunities for rural leadership. Mr. Winston.

Rural Soc. 411. Rural Population Problems. 3 0-0

The number and distribution in relation to natural resources; physical and demographic characteristics; marriage rates; natural increase; migration; morbidity; mortality; occupations; rural-urban comparisons; trends; and national policies. Messrs. Hamilton, Winston.

Rural Soc. 413. 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: structure and size; institutions and service agencies; disorganization; techniques and methods of organization; leadership and the relation of organizations to State and National agencies. Mr. Mayo.

Rural Soc. 421. Rural Social Psychology. 3-0-0

Characteristic mental traits and attitudes of rural people in relation to social organization and social change. Mr. McGehee.

Rural Soc. 422. Social Aspects of Land Tenure. 0-3-0

Character and history of different types of land tenure; origins and growth of farm tenancy in the United States; social correlatives of land tenure; landlord-tenant relationships; the farm leases; problems of ownership; farm mortgages; reform programs. Messrs. Hamilton, Forster.

Rural Soc. 432. Rural Poverty and Relief. 0 3-0

Origin, extent, and character of rural poverty; types and extent of relief; problems of prevention; public policies and programs. Mr. Mayo.

Rural Soc. 451. Agricultural Extension and Education. 3-0-0

History, objectives, and methods of agricultural extension and education in the United States. Mr. Hamilton and Extension Staff.

Courses for Graduates Only

Rural Soc. 531. Rural Standards of Living. 3-0-0

Theories and surveys of rural standards of living. Forces and programs affecting present-day standards. Mr. Hamilton.

Rural Soc. 532. The Rural Family. 0-3-0

Historical forms and functions of rural family life; family activities and relationships; stages of family growth; the family-sized farm; effects of technical and economic changes on the rural family; national policies.
Messrs. Hamilton, Winston.

Rural Soc. 533. The Rural Community. 0-0-3

Human ecology; types of communities; historical trends; economic, cultural, and psychological factors; solidarity and disorganization; special interest groups; service agencies; state and national relations; "Utopian" experiments; planning. Mr. Mayo.

Rural Soc. 541, 542, 543. Research in Rural Sociology. 3-3-3

Objectives of research; the scientific method; planning, organization, and direction of rural studies; preparation of schedules, interviewing, editing, tabulation, and analysis; field experience; preparation of research reports.

Credit for 543 involves at least 6 weeks' field and laboratory experience.
Staff.

SOCIOLOGY

(For Courses in Rural Sociology see page 299)

Courses for Undergraduates

Soc. 101, 102, 103. Human Relations. 2-2 2

Required of students in the School of Agriculture who do not take Military Science. Elective for others.

An orientation course to introduce the student to the social problems of our time. Staff.

Soc. 202. Introductory Sociology. 3-0-0 or 0-3-0 or 0 0-3

Required of students in Forestry; elective for others.

The basic principles underlying social life and the factors connected with it. (Identical with the first term of General Sociology.)
Messrs. Winston, Mayo, Hamilton.

Soc. 202, 203. General Sociology. 3-3-0

First term: an analysis of the fundamental factors affecting life in modern society; second term: practical social problems, using the tools developed in the first term. Mr. Winston.

Soc. Ex. 210. General Anthropology. 3 credits

An introduction to the study of man: a consideration of his development from earliest forms to the present. Mr. Winston.

Courses for Graduates and Advanced Undergraduates

Soc. Ex. 400. Criminology. 3 credits

Prerequisite: Soc. 202, supplemented by credits in related fields.

Causes and conditions leading to crime; methods of handling criminals; various factors producing criminal behavior. Mr. Winston.

Soc. 401. Social Pathology. 0-0-3

Prerequisite: Soc. 202, supplemented by credits in related fields.

Pathological problems arising from social life; social and individual adjustments. Mr. Winston.

Soc. Ex. 402. Sociology of City Life. 3 credits

Prerequisite: Soc. 202, supplemented by credits in related fields.

Elective.

Problems arising from growth of modern town and city life; city planning in regard to social and industrial progress. Mr. Winston.

Soc. Ex. 403. Leadership. 3 credits

Prerequisite: nine term credits in Sociology, including Sociology 202.

A study of leadership in various fields of American life: analysis of the various factors, inherent or acquired, that are associated with leadership, past and present. Mr. Winston.

Soc. Ex. 404. Educational Sociology. 3 credits

Prerequisite: nine term credits in the Social Sciences.

Application of the principles of Sociology to the practical problems of education with emphasis placed on the relation between adjustment processes in the school and in the larger social world. Mr. Winston.

Soc. 406. The American Family. 0-3-0

Prerequisite: Soc. 202, supplemented by credits in related fields.

Premarital, marital, and family relations; effects of present-day social changes; various efforts to stabilize the family. Messrs. Winston, Hamilton.

Soc. 407. Race Relations. 3-0-0

Prerequisite: Soc. 202, supplemented by credits in related fields.

Elective.

Race problems in America and in other countries; social, economic, and educational status of racial groups; international relations.

Mr. Winston.

Soc. Ex. 408. Social Anthropology. 3 credits

Prerequisites: Soc. 202 or Soc. 210, supplemented by credits in related fields.

Analysis of present-day culture, with particular reference to the United States and its regional variations. Mr. Winston.

Soc. 410. Industrial Sociology. 0-0-3

Prerequisite: Soc. 202, supplemented by credits in related fields.

Influence of industrial life; occupations as social and industrial factors; problems arising from our industrial era. Mr. Winston.

Soc. 411. Population Problems. 3-0-0

Prerequisite: Soc. 202, supplemented by credits in related fields.

Analyses of crucial 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. Messrs. Winston, Hamilton.

Soc. 415. Research in Applied Sociology. 2-2-2

Prerequisite: nine hours of Sociology, and permission of the instructor.

Individual research problems in applied fields of sociology, such as problems of the family, of population, of social work; rural-urban relations; student success; American leadership. Mr. Winston.

SOILS (AGRONOMY)

Courses for Undergraduates

Soils 201. Soils. 4 0-0 or 0-0-4

Prerequisites: Geol. 120 and Chem. 101, 102, 103.

Required of sophomores in Agriculture and Agricultural Chemistry, and of juniors in Forestry and Wildlife Conservation and Management.

The makeup, origin and classification of soils; the soil as a medium for plant growth. Mr. Lutz.

Soils 221. Soil Fertility. 3-0-0

Prerequisite: Soils 201.

Required of juniors in Pomology, Vegetable Gardening, Floriculture, Field Crops, Vocational Agriculture, and of seniors in Agricultural Engineering.

Chemical and biological properties of soils as related to soil productivity. Mr. Lutz.

Soils 302. Fertilizers. 0-3-0

Prerequisite: Soils 221.

Required of juniors in Pomology, Vegetable Gardening, Field Crops, Floriculture, and Vocational Agriculture.

Sources, manufacture and characteristics of fertilizer materials; manufacture and evaluation of mixed fertilizers; factors affecting the choice and utilization of fertilizers; time and methods of application. Mr. Collins.

Soils 303. Soil Management. 0-0-3

Prerequisite: Soils 302.

Rotations, fertilizer recommendations, and other practical soil management problems for North Carolina soils and cropping systems. Mr. Lutz.

Soils 312. The Soils of North Carolina. 0-3-0

Prerequisite: Soils 201. Required of juniors in Soils and Floriculture and of seniors in Wildlife Conservation, Vegetable Gardening, and Agricultural Economics (Farm Business Option).

The origin, characteristics, and classification of North Carolina soils; field trips. Mr. Lee.

Courses for Advanced Undergraduates and Graduates

Soils 401. Soil Development. 3-0-0

Prerequisites: Soils 303, 312.

Genesis, morphology, and development of the great soil groups of the world. Mr. Lutz.

Soils 421. Soil Fertility Evaluating Methods. 3-0-0

Prerequisites: Soils 302 and Chem. 213.

Analysis for total and available elements in the soil; the use of soil and plant analyses in soil diagnosis. Mr. Piland.

Soils 433. Soil Conservation and Land Use. 0-0-3

Prerequisite: Soils 221.

Required of seniors in Soils and in Agricultural Engineering.

Factors affecting soil deterioration; soil conservation and land use. Mr. Lutz.

Soils 443. Soil Microbiology. 0-0-3

See Botany 443.

Soils 463. Advanced Soil Fertility. 0-0-3

Prerequisite: Soils 302.

Soil conditions affecting crop growth; the chemistry of soil and plant interrelationships; theoretical and applied aspects of fertilizer usage in relation to plant nutrition. Mr. Cummings.

Soils 491, 492, 493. Special Problems. 3-3-3

Prerequisite: Admitted only with consent of the instructor.

Problems involving special library, laboratory or field studies of soils. Staff.

Courses for Graduates Only

Soils 503. Advanced Fertilizers. 0-0-2

Prerequisite: Graduate standing in Soils.

Recent trends in the manufacture, characteristics and utilization of fertilizers; new developments in fertilizer experimentation. Offered in alternate years. Mr. Collins.

Soils 512. Physical and Colloidal Chemistry of Soils. 0-5-0

The origin and nature of inorganic and organic soil colloids; their behavior with respect to soil acidity, base exchange, absorption; and plant nutrition. Offered in alternate years. Messrs. Cummings, Lutz.

***Soils 522. Soil Physics.** 0-5-0

Prerequisite: Graduate standing in Soils.

Physical constitution of soils, mechanical analysis, consistency and plasticity, structure, water relations, soil air and temperature. Offered in alternate years. Messrs. Cummings, Lutz.

Soils 531, 532, 533. Seminar. 1-1-1

Prerequisite: Graduate standing in Soils.

Reports and discussions of problems in Soil Science. Staff.

Soils 541. 542, 543. Soil Research.

Prerequisite: Graduate standing in Soils.

Research in specialized phases of Soil Science. By arrangement. Staff.

TEXTILES

Courses for Undergraduates

Tex. 101, 102, 103. Textile Principles Laboratory. 1-1-1

Required of freshmen in all Textile curricula.

Operation of plain and automatic looms, and carding and spinning machines. Messrs. Porter, Culberson.

Tex. 104. Yarn Calculations. 0-1-0

Required of freshmen in all Textile curricula.

Calculations for gears, pulleys, and machine speeds; systems of numbering yarns, and elementary yarn calculations. Mr. Culberson.

Tex. 131. Cloth Calculations. 0 0-2

Required of freshmen in all Textile curricula.

Harness, reed and fabric calculations; loom production problems.
Mr. Porter.

* Not given in 1942-43.

Tex. 205. Yarn Manufacture I. 3-0-0 or 0-0-3

Tex. 201, 203. Yarn Manufacture Laboratory I. 1-0-1 or 0-1-1

Required of sophomores in all Textile curricula.

Mixing of cotton; description and setting of openers, pickers, cards and draw frames; production, speed and draft calculations; operation and fixing of machines; grinding and setting of cards; setting of draw frame rolls and construction of draw frames; weighting of rolls and types of roll covering. Messrs. Hilton, Culberson.

Tex. 211. Knitting I. 2-0-0 or 0-0-2

Tex. 207, 208, 209. 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. 234. Power Weaving. 0-2-0

Tex. 231, 232. Power Weaving Laboratory. 1-1-0 or 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. Messrs. Nelson, Porter.

Tex. 236, 237. 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. Messrs. Porter.

Tex. 239. 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.

Messrs. Nelson, Hilton.

Courses for Advanced Undergraduates

Tex. 304. Yarn Manufacture II. 0-3-0

Tex. 301, 302, 303. Yarn Manufacture Laboratory II. 1-1-1

Prerequisites: Yarn Manufacture I, Tex. 201, 203, 205.

Required of juniors in Textile Manufacturing. Elective for others.

Tex. 310, 311. Yarn Manufacture III. 0-3-3

Tex. 307, 308, 309. Yarn Manufacture Laboratory III. 2-2-2

Prerequisites: Yarn Manufacture I, Tex. 201, 203, 205.

Required of juniors in Yarn Manufacture.

Construction of sliver lappers; ribbon lappers; combers; mechanical and electrical stop motions; description and setting of the different parts; care of machines; fly-frame builder and differential motions.

Operation and fixing of sliver lappers; ribbon lappers; combers and fly-frames; changing of hank roving, draft and twist; setting of drafting and speeder motions. Messrs. Hilton, Culberson.

Tex. 316. Knitting II. 0-3-0

Tex. 313, 314, 315. Knitting Laboratory II. 1-1-1

Prerequisites: Knitting I, Tex. 207, 208, 209, 211.

Elective for Textile Students.

Advanced circular mechanisms; hosiery design; auxiliary knitting machinery; warp and spring needle knitting; knitting machinery lay-out and organization. Production control and costs. Laboratory experiments.

Mr. Lewis.

Tex. 335. Dobby Weaving. 3-0-0 or 0-0-3

Tex. 331, 332, 333. Dobby Weaving Laboratory I. 1-1-1

Required of juniors in Textile Manufacturing and Yarn Manufacturing. Elective for others.

Tex. 337, 338, 339. Dobby Weaving Laboratory II. 2-2-2

Prerequisites: Power Weaving, Tex. 231, 232, 234.

Required of juniors in Weaving and Designing.

Methods of drawing in and starting up cotton and rayon warps; setting of harness shafts; selection of springs or spring jacks. Contruction 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. Messrs. Nelson, Hart.

Tex. 341, 342. Fabric Design and Analysis I. 3-3-0 or 0-3-3

Prerequisites: Fabric Structure and Analysis, Tex. 236, 237.

Required of juniors in Textile Manufacturing and Weaving and Designing. Elective for others.

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 fabrics from data obtained from sample. Mr. Shinn.

Tex. 343. Fabric Testing. 0-0-1

Prerequisites: Fabric Structure and Analysis, Tex. 236, 237.

Required of juniors 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. 344. Calculating Fabric Costs. 0-3 0

Prerequisites: Fabric Structure and Analysis, Tex. 236, 237.

Elective for Textile students.

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.

Tex. 315. Textile Calculations I. 0-0-3

Prerequisites: Fabric Structure and Analysis. Tex. 236, 237.

Required of juniors in Textile Manufacturing and Weaving and Designing. Elective for others.

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. 347. Principles of Textile Manufacturing II. 0-0-3

Prerequisites: Principles of Textile Manufacturing I, Tex. 239.

A study of the operation and care of textile machines, planned for those who are preparing to be teachers in vocational schools.

Messrs. Nelson, Hilton.

Tex. 375. Dyeing I. 3-0-0 or 0-0-3

and

Tex. 371, 372, 373. Dyeing Laboratory I. 1-1-1

Prerequisites: Chemistry 103.

Required of juniors in Textile Manufacturing. Elective for others.

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; test for fastness to light, washing, cross dyeing, and so forth; mercerizing experiment. Messrs. Grimshaw, Hayes.

Tex. 381, 382. Dyeing II. 3-3-0

and

Tex. 377, 378, 379. Dyeing Laboratory II. 2-2-2

Prerequisite: Chemistry 103.

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 tests 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.
Messrs. Grimshaw, Hayes.

Courses for Graduates and Advanced Undergraduates

Tex. 405. Yarn Manufacture IV. 3-0-0 or 0-0-3

Tex. 401, 402, 403. Yarn Manufacture Laboratory IV. 1-1-1

Prerequisites: Yarn Manufacture, Tex. 301, 302, 303, 304.

Required of seniors in Textile Manufacturing. Elective for others.

Tex. 411, 412. Yarn Manufacture V. 3-3 0

Tex. 407, 408, 409. Yarn Manufacture Laboratory V. 2-2-2

Prerequisites: Yarn Manufacture, Tex. 307, 308, 309, 310, 311.

Required of seniors in Yarn Manufacturing.

Spinning; spooling; warping; 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, warping, 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. Messrs. Hilton, Culberson.

Tex. 413. Textile Calculations II. 3-0-0

Prerequisites: Yarn Manufacture II or III, Tex. 304 or 310, 311.

Required of seniors in Yarn Manufacturing. Elective for others.

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. 415. Manufacturing Problems. 0-0-3

Prerequisites: Yarn Manufacture II or III, Tex. 304 or 310, 311.

Required of seniors in Yarn Manufacturing. Elective for others.

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. 416. Wool Manufacture I. 0-3-0

Tex. 417, 418. Wool Manufacture Laboratory I. 1-1-0

Prerequisites: Yarn Manufacture II or III, Tex. 304, or Tex. 310, 311.

Elective for seniors in Textile School.

Physical and chemical properties; reclaimed wool and secondary raw materials; grading; sorting; mixing and blending; oiling and garnetting; description of feeders; cards; tape condensers; card setting; stripping and grinding; woolen spinning; twister head; mechanical details and production; the practical application of machines in Woolen Yarn Manufacture.

Mr. Hilton.

Tex. 435. Cotton, Wool and Rayon Weaving. 0-0-3

Tex. 431, 432, 433. Cotton, Wool and Rayon Weaving Laboratory I. 1-1-1

Prerequisites: Dobby Weaving, Tex. 331, 332, 333, 335.

Required of seniors in Textile Manufacturing. Elective for others.

Tex. 437, 438, 439. Cotton, Wool and Rayon Weaving Laboratory II. 2-2-1

Prerequisites: Dobby Weaving, Tex. 335, 337, 338, 339.

Required of seniors in Weaving and Designing.

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, wool and fine cotton fabrics; building of box, dobby, and multiplier chains. Messrs. Nelson, Hart.

Tex. 441. Leno Design. 3-0-0 or 0-3-0

Prerequisites: Fabric Design and Analysis I, Tex. 341, 342.

Required of seniors in Textile Manufacturing and in Weaving and Designing. Elective for others.

Leno weaves with one, two, or more sets of doups; combination of plain and fancy weaves with leno; methods of obtaining leno patterns; methods of making original designs for dress goods, draperies.

Messrs. Nelson, Shinn.

Tex. 443. Dobby Design. 3-0-0 or 0-3-0

Prerequisites: Fabric Design and Analysis I, Tex. 341, 342.

Required of seniors in Textile Manufacturing and in Weaving and Designing. Elective for others.

Designing fabrics, such as fancy crepes, figured double plain, matelasse, velvets, corduroys, pique, lines of samples. Mr. Nelson.

Tex. 445. Jacquard Design. 0-0-3

Prerequisites: Fabric Design and Analysis I, Tex. 341, 342.

Required of seniors in Textile Manufacturing and juniors in Weaving and Designing. Elective for others.

Designing fancy and jacquard fabrics; methods of making original designs for table napkins, table covers, dress goods, draperies.

Messrs. Nelson, Shinn.

Tex. 447, 448, 449. Jacquard Design Laboratory. 1-1-1

Prerequisites: Jacquard Design, Tex. 445.

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. Messrs. Nelson, Shinn.

Tex. 451, 452. Fabric Analysis. 2-2-0

Prerequisites: Fabric Design and Analysis, Tex. 341, 342.

Required of seniors in Textile Manufacturing and Weaving and Designing. Elective for others.

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.

Messrs. Nelson, Shinn.

Tex. 453. Fabric Design and Analysis II. 0-0-3

Prerequisites: Fabric Design and Analysis I, Tex. 341, 342.

Required of seniors in Weaving and Designing.

Design and analysis of fancy fabrics; making fabrics from sketches and specifications. Mr. Shinn.

Tex. 455, 456. Color in Woven Design. 3-3-0

Prerequisites: Fabric Structure and Analysis, Tex. 236, 237.

Required of seniors in Weaving and Designing. Elective for others.

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. 457, 458, 459. Textile Testing. 1-1-1

Prerequisite: Fabric Testing, Tex. 343 or equivalent.

Elective for Textile students.

Tests for moisture content, regain, twist, and tensile strength; description and operation of testing equipment; solution and written reports of assigned textile problems. Messrs. Hart, Hilton, Shinn.

Tex. 474. Cotton and Rayon Dyeing I. 0-3-0

Tex. 471, 472, 473. Cotton and Rayon Dyeing Laboratory I. 1-1-1

Prerequisites: Dyeing I, Tex. 371, 372, 373, 375.

Required of seniors in Textile Manufacturing. Elective for others.

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. Messrs. Grimshaw, Hayes.

Tex. 475. Textile Microscopy I. 0-0-1

Prerequisites: Dyeing I or II, Tex. 375 or 381, 382.

Required of seniors in Textile Manufacturing. Elective for others.

Instruction in the use of the microscope; examination of fibres; preparation of permanent slides. Messrs. Grimshaw, Hayes.

Tex. 480, 481. Cotton and Rayon Dyeing II. 0-3-3

Tex. 477, 478, 479. Cotton and Rayon Dyeing Laboratory II. 2-2-2

Prerequisites: Dyeing II, Tex. 377, 378, 379, 381, 382.

Required of seniors in Textile Chemistry and Dyeing.

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; microscopial 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. 487. Textile Printing. 3-0-0

Tex. 483, 484, 485. Textile Printing Laboratory. 1-1-1

Prerequisites: Dyeing II, Tex. 381. 382.

The history of printing and the development of machinery used; calico printing and the mordant, basic, and vat colors, analine black, indigo, and insoluble azo colors; resist and discharge styles.

Paste mixing; practical experiments. Messrs. Grimshaw, Hayes.

Tex. 489, 490. Textile Microscopy II. 1-1-0

Prerequisites: Dyeing I or II, Tex. 375 or 381, 382.

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. Messrs. Grimshaw, Hayes.

Tex. 495. Principles of Fabric Finishing. 0 0-3

Tex. 491, 492, 493. Principles of Fabric Finishing Laboratory. 1-1-1

Prerequisites: Dyeing II, Tex. 371, 372.

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 Only

Tex. 501, 502, 503. Yarn Manufacture. 3-3-3

Prerequisites: Yarn Manufacture IV, Tex. 405 or equivalent.

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. 505, 506, 507. Textile Research. 3-3 3

Prerequisite: Graduate standing.

A study of the moisture content of cotton yarns and fabrics; the con volutions 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. 531, 532, 533. Textile Design and Weaving. 3-3-3

Prerequisites: Leno, Dobby and Jacquard Design, Tex. 441, 443, 445 or equivalent.

Study and practice in more advanced designing and analysis 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, Shinn.

Tex. 535, 536, 537. Seminar. 1-1-1

Discussion of scientific articles of interest to textile industry; review and discussion of student papers and research problems. Textile Staff.

Tex. 571, 572, 573. Textile Dyeing. 3-3-3

Prerequisites: C. & R. Dyeing I, Tex. 474 or equivalent.

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 rayon; advanced work on chemical and microscopical examination of materials used in dyeing and finishing.

Mr. Grimshaw.

Tex. 575. Advanced Textile Microscopy. 0-0-3

Prerequisites: Textile Microscopy, Tex. 489, 490.

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.

ZOOLOGY

Courses for Undergraduates

Zool. 101. General Zoölogy. 4-0-0

Required of freshmen in General Agriculture, Agricultural Education, Forestry, Wildlife Conservation, and of juniors in Agricultural Engineering.

Animals with special reference to the morphology and physiology of vertebrates.

Messrs. Mitchell, Meacham, McCutcheon, Schoof.

Zool. 102. Economic Zoölogy. 0-4-0

Required of freshmen in Forestry and Wildlife Conservation; of sophomores in General Agriculture, Agricultural Education, and in Agricultural Chemistry; of juniors in Landscape Architecture.

Animals with special reference to the more important economic groups; designed to give the student a general knowledge of the animal kingdom.

Messrs. Mitchell, Meacham, Bostian, Schoof.

Zool. 111. Elementary Wildlife Management. 1-0-0

Required of freshmen in Wildlife Conservation.

An introductory survey of the field of wildlife management.

Mr. Stevens.

Courses for Advanced Undergraduates

Zool. 202. Animal Physiology. 0-5 0 or 0-0-5

Prerequisites: Zool. 101, Phys. 115, Chem. 101, 102, and 103. Alternate for sophomores in General Agriculture, Agricultural Education and Agricultural Chemistry; required of juniors in Wildlife Conservation.

Comparative physiology of vertebrates, with particular reference to mammals and man. Detailed studies of various functions, with metabolism emphasized. Mr. McCutcheon.

Zool. 213. Economic Entomology. 0-0-4

Prerequisite: Zool. 102.

Required of freshmen in Forestry; juniors in Wildlife Conservation, Landscape Architecture, Agricultural Education, Vegetable Gardening, Pomology, Plant Pathology and Floriculture.

The insects, including their economic importance and the principles of control. Messrs. Mitchell, Meacham, Schoof.

***Zool. 222, 223. Comparative Anatomy.** 0-4-4

Prerequisites: Zool. 101, 102.

Required of sophomores in Wildlife Conservation; of juniors in Entomology.

Comparative morphology of vertebrates. Interrelations of organ systems studied for the various groups. Mr. Harkema.

Zool. 241, 243. Beekeeping. 3-0-3

Prerequisite: Zool. 102.

Required of seniors in Entomology.

Scientific beekeeping and honey marketing. Mr. Meacham.

Zool. 251, 252, 253. Ornithology. 2-2-2

Prerequisites: Zool. 101, 102.

Required of sophomores in Wildlife Conservation.

Biology and morphology of North American birds. Mr. Metcalf.

Zool. 302. Forest Entomology. 0-3-0

Prerequisite: Zool. 213.

Required of juniors in Forestry.

Forest insects, including the factors governing abundance, and the application of this knowledge in control. Mr. Schoof.

Zool. 312. Principles of Game Management. 0-3-0

Elective for juniors and seniors not in Game Management.

Brief survey of the field, study of the major principles involved, and the correlation of wildlife management with other land uses. Mr. Stevens.

* Not offered in 1943-44.

Zool. 321, 322, 323. Wildlife Conservation. 3-3 3

Prerequisites: Zool. 251, 252, 253, F. C. 202, Bot. 101, 102, 203.

Required of juniors in Wildlife Conservation and Management.

History of game and wildlife management; relation of wildlife conservation to soil and forest conservation; national and state parks; general farming operations. Mr. Stevens.

Zool. 332. Fur Resources. 0-3-0

Prerequisites: Zool. 321, 322, 323.

Elective for juniors and seniors in Wildlife Conservation.

Life history and management of the important fur-bearing animals; skinning, drying, marketing pelts; fur farming. Mr. Stevens.

Courses for Graduates and Advanced Undergraduates

Zool. 401, 402, 403. Applied Entomology. 3-3-3

Prerequisites: Zool. 213.

Required of seniors in Entomology.

Crop and animals pests with emphasis on their identification; general principles of insect control and special study of contact insecticides, stomach poisons and fumigants; insecticide research methods. Mr. Fulton.

Zool. 411. Genetics. 4-0-0

Prerequisite: Bot. 102 or Zool. 101.

Required of juniors in Animal Production, Entomology, Field Crops, Floriculture, Pomology, Poultry Science, and Vegetable Gardening; of seniors in Plant Pathology.

Basic principles of heredity and variation. Students conduct breeding experiments and study inheritance in various animals and plants. Mr. Bostian.

Zool. 412. Advanced Genetics. 0 4 0

Prerequisite: Zool. 411.

Elective for juniors, seniors, and graduates.

Intended for students desiring more thorough and detailed training in fundamental genetics than provided by Zool. 411, with some attention to biometry and recent advances. Mr. Bostian.

Zool. 413. Advanced Physiology. 0-0-3

Prerequisites: Zool. 101, 102, 202.

Elective for juniors and seniors.

Special studies in animal physiology with emphasis on fundamental processes involved. Lectures, reports, and conferences to promote an acquaintance with general literature and recent advances; selected exercises and demonstrations to develop experimental technique. Mr. McCutcheon.

Zool. 421, 422, 423. Systematic Zoölogy. 3-3-3

Prerequisites: Zool. 101, 102.

Required of juniors in Entomology.

The classification of insects or other groups of animals.

Messrs. Metcalf, Mitchell.

Zool. 433. Field Zoölogy. 0-0-4

Prerequisites: Zool. 101 and 213, or 222, 223.

Required of juniors in Wildlife Conservation and seniors in Entomology.

The relation between animals and their environment. Frequent excursions to the field will be taken. Messrs. Bostian, Schoof.

****Zool. 441, 442. Histology.** 3-3-0

Prerequisites: Zool. 101, 102, 202, 222, 223.

Required of seniors in Entomology.

Animal tissues and their preparation. Mr. Harkema.

Zool. 451, 452, 453. Wildlife Management. 3-3-3

Prerequisites: Zool. 321, 322, 323.

Required of seniors in Wildlife Conservation.

Foods and feeding habits of the more important groups of wild animals; field and laboratory studies of wildlife management and research; the economic relations of game, predatory, and fur-bearing animals.

Mr. Stevens.

***Zool. 461. Vertebrate Embryology.** 5-0-0

Prerequisites: Zool. 101, 102.

Required of juniors in Poultry Science, and seniors in Entomology.

The comparative embryology of the principal groups of vertebrates, with special emphasis on the chick. Mr. Harkema.

* Not given in 1942-43.
** Not given in 1943-44.

Zool. 462, 463. Advanced Animal Ecology. 0-3-3

Prerequisite: Zool. 433.

Required of seniors in Wildlife Conservation.

Animal geography and the factors which influence the distribution of animals. Mr. Metcalf.

Zool. 471, 472, 473. Advanced Wildlife Management. 3-3-3

Prerequisite: Concurrently with or preceded by Zool. 321, 322, 323.

Elective for seniors in Wildlife Conservation.

An assigned problem to be planned and worked out by the student. A term paper covering the procedure. Mr. Stevens.

Zool. 481, 482, 483. Advanced Food Habits Problems. 3-3-3

Prerequisite: Concurrently with or preceded by Zool. 451, 452, 453.

Elective for seniors in Wildlife Conservation.

Assigned or selected problem dealing with the foods and feeding habits of one species of wild animal or a group of similar wild animals. Mr. Stevens.

***Zool. 492, 493. Parasitology.** 0-3-3

Prerequisite: Zool. 101, 102, 222, 223.

Required of seniors in Wildlife Conservation.

Structures, life-cycles, pathogenicity and control of animal parasites. Mr. Harkema.

Courses for Graduates Only

Zool. 501, 502, 503. Systematic Entomology. 3-3-3

Prerequisite: Zool. 421, 422, 423.

Codes of nomenclature, methods of writing descriptions, constructing keys, determining priority, selecting and preserving types, and making bibliographies and indexes. Messrs. Metcalf, Mitchell.

Zool. 511, 512, 513, and Zool. 551, 552, 553. Research in Zoölogy. 3-3-3

Prerequisite: eighteen term credits in Zoölogy.

Problems in development, life history, morphology, physiology, ecology, genetics, game management, taxonomy, or parasitology.

Messrs. Metcalf, Mitchell, Bostian, McCutcheon, Harkema, Stevens.

Zool. 521, 522, 523. Seminar. 1-1-1

Prerequisite: eighteen term credits in Zoölogy. Mr. Metcalf.

---

* Not given in 1942-43.

Zool. 531, 532. Biological Control of Insects. 3-0-0

Diseases, predators and parasites of insects; methods of rearing and disseminating for biological control. Messrs. Fulton, Smith.

Zool. 533. Advanced Genetics. 0-0-3

Prerequisite: Zool. 411, 412.

Special topics and recent advances, accomplished by lectures, references, conferences, and reports by students, each selecting one or more topics for special study. Mr. Bostian.

Zool. 541, 542. Insect Physiology. 3-3-0

Prerequisite: Zool. 202.

Mechanisms involved in the life processes of insects. Mr. McCutcheon.

Zool. 543. Fruit Insects. 0-0-3

Prerequisite: Zool. 213 or equivalent.

The economic importance of insects attacking fruit or fruit trees; their characteristics, habits, ecology, and biology; with most practical control measures. Mr. Smith.

Zool. 551, 552, 553. Research in Zoölogy. 3 3 3

See Zool. 511, 512, 513.

Zool. 561, 562, 563. Insect Biology. 3-3-3

Life histories, including modes of reproduction, embryology, growth, metamorphosis, protection, food relations, hibernation, social relations, and adaptations. Mr. Mitchell.

Zool. 571, 572, 573. Insect Ecology and Behavior. 3-3-3

Natural activities of insects: feeding, protection, reproduction, reaction to environmental factors, interrelations, and distribution. Mr. Fulton.

Zool. 581, 582, 583. Insect Morphology. 3-3-3

The external and internal anatomy of insects and their near relatives. Mr. Metcalf.

Zool. 591. Immature Insects. 0-3-0

Prerequisite: Zool. 102 and 213 or equivalent.

Methods of collecting, preserving and determining immature insects. Mr. Smith.

V. SUMMARY OF ENROLLMENT 1941-42*

1. Resident Students		
A. Candidates for Degrees		
1. Freshmen	1,045	
2. Sophomores	616	
3. Juniors	374	
4. Seniors	374	
5. Graduates	133	
6. Candidates for Professional Degrees	1	
Total	2,530	
B. Irregular Students		
†1. Extension Classes in Raleigh and Cary	233	
2. Special Students and Auditors	15	
Total	248	2,778
†2. Nonresident Students		
A. Correspondence Students for College Credit	1,134	
B. Extension Students (Classes outside Raleigh)	795	
C. Correspondence Students in Practical Courses, no credit	68	
Total	1,997	4,775
3. Summer School Students, 1941		
A. Regular Students		
1. Six weeks	892	
2. Three weeks	82	
3. Ten weeks	19	
B. Cotton Classing Students, no credit	9	
Total	1,002	5,777
4. Short Courses and Special Conferences		
1. Institute for Engineers (one day)	51	
2. N. C. Society of Surveyors (one day)	40	
3. Safety School for Truck Operators (one day)	67	
4. Conference for Plumbing & Heating Cont. (two days)	125	
5. Water Works School (four days)	76	
6. Coal Conference (one day)	160	
7. Institute for Electrical Cont. (three days)	107	
8. Gas Plant Operators (two days)	109	
9. Veterinarian's Short Course (four days)	97	
10. Future Farmers of America (two days)	917	

* Does not include Spring Term, 1941-42.
† Data from January, 1941 to January, 1942.

11. Vocational Teachers Conference (three days) . . . 300
12. 4-H Club (one week) . . . 973
13. Farm Men and Women (one week) . . . 1,329
14. County and Home Demonstration Agents (five days) . . . 450

Engineering Defense Training Courses

15. Aircraft Inspection . . . 55
16. Airport Design . . . 29
17. Architectural Drafting . . . 43
18. Chemical Testing and Inspection . . . 84
19. Diesel Engineering . . . 69
20. Electrical Distribution . . . 44
21. Fundamentals of Electrical Distribution . . . 90
22. Engineering Drawing . . . 90
23. Experimental Electronics . . . 39
24. Fabric Testing and Inspection . . . 41
25. Instrument Men and Topographers . . . 51
26. Materials Testing and Inspection . . . 93
27. Power System Stability and Protection . . . 16
28. Production Engineering . . . 46
29. Production Supervision . . . 17
30. Spectroscopy in Industry . . . 14
31. Surveying . . . 22

Engineering Science and Management Defense Training Courses

32. Aircraft Inspection . . . 29
33. Architectural Engineering and Drafting . . . 23
34. Chemical Testing and Inspection . . . 42
35. Diesel Engineering . . . 28
36. Electrical Distribution, Prin. and Practice . . . 17
37. Power Network Calculations . . . 12
38. Industrial Electric Control and Protection . . . 10
39. Engineering Drawing . . . 25
40. Fabric Testing and Inspection . . . 26
41. Instrument Men and Topographers . . . 23
42. Materials Testing and Inspection . . . 27
43. Production Supervision . . . 20
44. Highway Engineering . . . 54
45. Electrical Distribution Engineering . . . 14
46. Fundamentals of Electrical Distribution . . . 23
47. Radio Communication . . . 201
48. Industrial Safety Control . . . 15

Vocational Training for National Defense

49. Welding—12 weeks . . . 160
50. Machine Shop—12 weeks . . . 165
51. Sheet Metal—12 weeks . . . 80

52. Armature Rewinding—12 weeks	30	
53. Blacksmithing—12 weeks	20	
54. Drafting—12 weeks	120	
55. Internal Combustion Engine Mechanics—12 weeks	82	
Total	6,890	
Grand Total		12,667

ENROLLMENT BY CURRICULA

Basic Division

Agriculture	326
Engineering	1,006
Teacher Education	109
Textiles	220
Total	1,661

School of Agriculture and Forestry

Agricultural Options	187
Agricultural Chemistry	15
Agricultural Engineering	2
Forestry	32
Landscape Architecture	3
Wildlife Cons. and Mgt.	2
Total	241

School of Engineering

Aeronautical	51
Architectural	16
Architecture	1
Ceramic	17
Chemical	98
Civil	29
Civil-Construction Option	11
Civil-Highway Option	3
Civil-Sanitary Option	3
Electrical	60
General	14
Geological	5
Industrial	25
Mechanical	59
Mechanical-Heat and Air Conditioning Option	3
Total	395

Division of Teacher Education

Agricultural Education	79
Industrial Arts Education	6
Industrial Education	1
Occup. Inf. and Guidance	30
Total	116

School of Textiles

Textiles	5
Textile Chemistry and Dyeing	28
Textile Management	19
Textile Manufacturing	50
Weaving and Designing	13
Yarn Manufacturing	2
Total	117

Nonclassified Auditors and Special Students	15

• • • • •

Distribution of Graduate students by schools (included in above departmental classifications).

Agriculture	83
Engineering	11
Teacher Training	31
Textiles	5
Candidates for Professional Degrees	1
Total	131

FIFTY-SECOND ANNUAL COMMENCEMENT

MONDAY EVENING, JUNE 9, 1941

DEGREES CONFERRED

SCHOOL OF AGRICULTURE AND FORESTRY

BACHELOR OF SCIENCE

IN AGRICULTURAL CHEMISTRY

Horace Porter Andrews	Lumberton
Michael Kalen Berkute	Franklinton
**Carroll Farmer Ireland	Franklinton
Robert Lee Michael	Salisbury
Ralph Warren Perry	Rectory, Va.
Clyde Wilson Saunders	Ruffin

IN AGRICULTURAL ENGINEERING

Paul Fredrick Hoch	Poughkeepsie, N. Y.
Charles Harold Lockhart	Durham
Oliver Folger Watson	Winston Salem

IN ANIMAL PRODUCTION

*Willie Flake Bowles	Hiddenite
Paul Elbert Culberson	Liberty
Frederick William Dotger, Jr.	Charlotte
Cecil Moseley Jackson	Dunn
**John David Jones	Brevard
*James Clarence King	Laurinburg
Clark Harrison Kirkman, Jr.	Pleasant Garden
George Howard May	North Bergen, N. J.
Clyde William Roberts	Weaverville
Mack Slagle Setser	Franklin
†Henry Haywood Tatum	Greensboro
William Franklin Welfare, Jr.	Wilson

IN DAIRY MANUFACTURING

William Gordon Greenlee	Marion
Ray Smith	Nutley, N. J.
*Edward Paul Valaer	Washington, D. C.

---

* Honors.
** High Honors.
† As of 1934.

IN FARM MARKETING AND FARM FINANCE

*Bert Watson Kenyon, Jr. Raleigh
Robert Vernon Lockhart, Jr. Monroe
Atlas Thomas Uzzell, Jr. Moore Haven, Fla.

IN FIELD CROPS AND PLANT BREEDING

Ernest Norman Dickerson Kinston
David Lloyd Dixon Kinston
Eccles Daily Elliott Hiddenite
Charley Harris Mayo Greenville
James Dempsey Simmons Seven Springs
Nathaniel Boyd White Manson

IN FORESTRY

Paul Douglas Abrams Hartford, Conn.
**Roland Ellsworth Carey Baltimore, Md.
*Graham Vance Chamblee Zebulon
Peter McKellar Cromartie Fayetteville
*Charles Edward Gill Richmond, Va.
Michael Goral New York, N. Y.
Barry Thomas Griffith Richmond, Va.
Thomas Gardner Harris Macon
*Fred Jay Hartman Merchantville, N. J.
John Williams Hilton Raleigh
Richard Edward Huff Mars Hill
Arthur Leroy Jolly Holland, Va.
Charles Dunkelberger Kuhns Kutztown, Pa.
*Jesse Levine Bronx, N. Y.
John Ervin McIver, Jr. Clearwater, Fla.
William Crews Picket Raleigh
*Theodore Francis Spiker Drexel Hill, Pa.
William Quentin Surratt Burlington
John Ezra Wiggins, Jr. Sunbury
Spencer Leigh Wilson Arlington, Va.

IN POULTRY SCIENCE

*Lee Roy Barnes Oxford
*Jewel Hoyt Davenport Creswell
Samuel Wesley Gibbs Raleigh
James Esmond Rollins Durham

IN SOILS

Frank Percival Shields Scotland Neck

* Honors.
** High Honors.

IN VEGETABLE GARDENING

Von Harvey Underwood ..... St. Paul

IN WILDLIFE CONSERVATION AND MANAGEMENT

William Lawrence Hamnett ..... Edneyville
June Shelton Wicker ..... Sanford
Charles Bailey Woodhouse ..... Elizabethtown

SCHOOL OF ENGINEERING

BACHELOR OF ARCHITECTURAL ENGINEERING

*Thomas Henry Brookbank ..... Winston-Salem
William Charles Correll ..... Albemarle
George Parker Fox ..... Rocky Mount
*John Herbert Holden, Jr. ..... Supply
*John Devereux Joslin ..... Raleigh
**Harold Brown Lefler ..... Albemarle
Ralph Bernard Reeves, Jr. ..... Raleigh
William Thomas Rowland ..... Charlotte
*Macon Strother Smith ..... Raleigh
Russell Sorrell ..... Raleigh
Charles Haywood Wheatley ..... Washington

BACHELOR OF CERAMIC ENGINEERING

Wingate A. Lambertson ..... Rich Square
*John William Nelley ..... Passaic, N. J.
*Martin William Parcel ..... Greensboro
Forrest Adair Paschal ..... Siler City
Robert Clifton Stuckey, Jr. ..... Charlotte
**Henry Hoen Thomas ..... Durham
Samuel LeRoy Thomas, Jr. ..... Westfield, N. J.
*Edwin Richard Todd ..... Charlotte

BACHELOR OF CHEMICAL ENGINEERING

**George Stanley Achorn ..... Danielson, Conn.
Ruggles Lee Baker ..... Asheville
Harry Earl Ballance ..... Portsmouth, Va.
Howard Bryant Bell, Jr. ..... Winston-Salem
John Ebid Bramlett ..... Cove Creek

---

* Honors.
** High Honors.

Kedar Bryan Brown ..... Wilmington
*James Walter Call ..... Wilson
Howard O. Charnock, Jr. ..... Asheville
William Edward Cline ..... Charleston, W. Va.
Charles Dewey ..... Goldsboro
Robert Martin du Bruyne ..... High Point
George Harold Duckworth ..... New Bedford, Mass.
Brownlow Wakefield Dunlap ..... Hillgirt
*Wade Preston Eagle ..... Salisbury
*John Thomas Ferguson ..... Raleigh
*Warren Sumter Ferguson ..... Raleigh
James Burton Hathaway ..... Sunbury
William Dallas Hawfield ..... Raleigh
Harris Lindsay Hendricks, Jr. ..... Laurinburg
Alonzo Alfred Hinton ..... Greensboro
**Eugene Graham Hollowell ..... Elizabeth City
Earl Moore Honeycutt ..... Burnsville
*John Robinson Hood, Jr. ..... Lillington
John Edward Houghton ..... New Bedford, Mass.
Paul Herman Lehman ..... Winston-Salem
Frederick William Maiwurm ..... Asheville
Goode Parham Mann ..... Paint Bank, Va.
**Dana Brooks Mattox ..... Pinetops
Arnold Edward Miller ..... Orbisonia, Pa.
Lawrence Richard Parsons, Jr. ..... Raleigh
Everett Richardson Proud ..... Goldsboro
William Angus Ray ..... Fayetteville
John Albert Rolston ..... Raleigh
Harvey McKoy Rose ..... Greenville, S. C.
Henry Boyden Rowe ..... Mount Airy
Philip Neal Sales ..... Asheville
Dallas Cullom Shearin ..... Roanoke Rapids
Christopher Nelson Sinback ..... Tarboro
John Carl Sloan, Jr. ..... Davidson
Robert Lucian Snakenberg ..... Raleigh
*Ervin William Squires ..... Draper
Richard Lamar Tatum ..... Raleigh
James Lester Thornton, Jr. ..... Spencer
Eugene Sanford Towery, Jr. ..... Concord
Ralph Benjamin Williams ..... Warrenton
Troy Durant Williams, Jr. ..... Winston-Salem
*James Wyman Young ..... Asheville

* Honors.
** High Honors.

BACHELOR OF CIVIL ENGINEERING

Robert Cooper Browning	Raleigh
Walter Bingham Cochran, Jr.	Raleigh
Lawrence E. Massengill	Four Oaks
Robert Finla Murphy	Atkinson
George William Snyder	Wadesboro
**Elia Sternberg	Vienna, Austria
James Allen Wellons	Raleigh

BACHELOR OF CIVIL ENGINEERING, CONSTRUCTION OPTION

James Ward Andrews	Wilmington
Thomas Frederick Armstrong	Columbia
William Noell Campbell	Raleigh
*Harrison William Fox	St. Petersburg, Fla.
Herbert Gilbert Hinson	Raleigh
Joseph Ewart Hunter, Jr.	Charlotte
LeGrand King Johnson	Winston-Salem
Averitte Nash Mattocks	Greensboro
*Sammy Roy Millhouse	Wilson
Edmund Wesley Price, Jr.	Raleigh
George Thomas Smith, Jr.	Charlotte
Claude Edward Talley	Semora

BACHELOR OF CIVIL ENGINEERING, HIGHWAY OPTION

Hubert Ernest Jennings	Raleigh
Charles Lee Price, Jr.	Whiteville

BACHELOR OF CIVIL ENGINEERING, SANITARY OPTION

Vincent Italo Gentile	Brooklyn, N. Y.
George Edward Weant, Jr.	Salisbury
John Ronald Williams	Arlington, Va.

BACHELOR OF ELECTRICAL ENGINEERING

George Robert Bason	Charlotte
*Herbert Edmond Church, Jr.	Franklin
Mark Wayne Cole, Jr.	Butters
*Charles Stuart Duncan	North Wilkesboro
Bruce Cushman Halsted	Arlington, Va.
William Earl Highfill	Coats
Burwell Bright Jackson	Highland Park, Mich.

* Honors.
** High Honors.

*Frank Alexander Jenkins . . . . . Charlotte
John Suter Jones, Jr. . . . . New Bern
William Field McRorie . . . . . Hickory
Leo Junior Misenheimer . . . . . Salisbury
*Richard David Naiman . . . . . Asheville
Robert Ellis Ownley . . . . . Elizabeth City
**William Hayne Rivers . . . . . Raleigh
John Davison Setzer . . . . . Maiden
**John Nelson Strawbridge . . . . . Durham
Benjamin Clayton Swaim . . . . . Cycle
Malcolm Everett Watson . . . . . Winston-Salem
Molton Henry Wheeler . . . . . Benson
Major Ray Whitley . . . . . Washington
*James Woodrow Willis . . . . . Memphis, Tenn.
Edwin Oscar Young . . . . . Oxford

BACHELOR OF INDUSTRIAL ENGINEERING

Spurgeon Emmett Adcock, Jr. . . . . Stokesdale
Robert Jene Craig . . . . . Wilmington
Edward Pruden Davidson . . . . . Murphy
Lewis Allen Fletcher . . . . . Raleigh
Eugene Leonard Gaskins . . . . . Grifton
Thomas Theodore Hay . . . . . Raleigh
George Herman Kizer . . . . . Granite Falls
Thomas Francis Moran . . . . . Westfield, N. J.

BACHELOR OF MECHANICAL ENGINEERING

Junius Mebane Andrews . . . . . Roseboro
*Ray Clark Andrews . . . . . Mount Olive
John Sheppard Avent . . . . . Sanford
Julian Wilbur Bunn, Jr. . . . . Raleigh
*Marvin Ray Campbell . . . . . Dunn
Norman Louis Chaffee . . . . . Morganton
William Alonzo Dickinson . . . . . Fayetteville
Lemuel Robert Gorrell . . . . . Greensboro
Garrett George Himmler . . . . . Raleigh
Richard Levester Hunnicutt . . . . . Monroe
*James Richard Huntley . . . . . Monroe
Theodore Calhoun Johnson . . . . . Paw Creek
Negus Wolcott Knowlton . . . . . Charlotte
Frank Kipp Kramer, Jr. . . . . Elizabeth City
Bruce Elliot Lewis . . . . . Raleigh
**William Flaude Morris, Jr. . . . . Raleigh

* Honors.
** High Honors.

Dennis Thomas Penland . . . Franklin
James McKever Pleasants . . Greensboro
Clery Victor Rodriguez . . Aguirre, Puerto Rico
Emil Cooper Shearon . . Raleigh
James Lindsay Stutts . . . Black Mountain

BACHELOR OF MECHANICAL ENGINEERING, AERONAUTICAL OPTION

Joe Nathan Drum . . Conover
Thomas Edison Haynes . Burlington
John Shields Laws . . Henderson
George Dewey Lewis . Rocky Mount
Axel Ture Mattson . . East Hampton, N. Y.
*Fred William Randall, Jr. . Bristol, Pa.
John Allison Scott . . Charlotte
Fred O. Smith . . McLeansville
Katharine Stinson . Raleigh
*Charles Whitson . Asheville
Leon Franklin Williams, Jr. . Raleigh

DIVISION OF TEACHER TRAINING

BACHELOR OF SCIENCE

IN AGRICULTURAL EDUCATION

*Jesse Ray Allen . Marshville
Loys Harding Austin . Mount Pleasant
William Montriville Bland . Pittsboro
Samuel Braxton Brandon . Yadkinville
Keith Charles Carpenter . Lincolnton
Hubert Cleveland Chaney . Monroe
Hilbert Hartwell Dawson . Dunn
John Edgar Elam . Kings Mountain
Guy Edgar Fisher, Jr. . Ahoskie
Wilburn Arthur Fuller . De Jarnette, Va.
Vaden Bell Hairr . Faison
*John Leary Hassell . Jamesville
Albert Titus Hicks . Oxford
Charlie Grover Hinson . Oakboro
Byron Lee Johnson . Scotland Neck
*Flavius Joseph Koonce, Jr. . Trenton
Swan B. Lacy, Jr. . Newland
Lester B. Laws . Kinston

* Honors.

Thurston Jefferson Mann ... Lake Landing
Brownlow Clayborn Nave, Jr. ... Newland
Lansing Carroll Peacock ... Roper
Maurice Maxwell Peacock ... Roper
**Wayland Julius Reams ... Apex
Edwin Thomas Smith ... Raleigh
Eston Smith Stokes ... Linwood
Howell Wilfred Stroup ... Cherryville
Wallace Frederick Thompson ... Elizabeth City
Guye William Troute ... Forest City

IN INDUSTRIAL ARTS EDUCATION

James Vincent Watters ... Bridgeport, Pa.

IN OCCUPATIONAL INFORMATION AND GUIDANCE

Walter Alan Knight ... Goldsboro

SCHOOL OF TEXTILES

BACHELOR OF SCIENCE

IN TEXTILE CHEMISTRY AND DYEING

*Richard Earle Brannon ... Rockingham
Lane Cox Drye ... Landis
Robert Shanaman Handly ... Upper Darby, Pa.
*Arnold Frank Ramalho ... New Bedford, Mass.
*John G. Soroka ... Lachine, Quebec, Canada
*Sidney Tager ... Brooklyn, N. Y.
Dwight Luther Turner ... Greensboro

IN TEXTILE MANAGEMENT

John Wilson Alexander ... Asheboro
Stephen Andrew Bundy ... Jamestown
Ona Virgil Byerly ... Lexington
Millard Nathan Carpenter, Jr. ... Margarettsville
*Harold Vaughan Edwards ... Fort Mill, S. C.
Arthur Richard Gewehr ... South Orange, N. J.
Richard Townsend Henning ... Albemarle
Daniel Harvey Hill ... Charlotte
Harry Sutton Messersmith, Jr. ... Montclair, N. J.
William Sarandria ... West New York, N. J.
Yang-Zung Yung ... Shanghai, China

* Honors.
** High Honors.

IN TEXTILE MANUFACTURING

Allison Douglass Allison ... Pine Bluff
*John Daniel Boger Concord
**Thomas Roland Brown Cramerton
William Murray Clark, Jr. Charlotte
Charles Cook Philadelphia, Pa.
Monte Lodge Crawford Graham
Richard Sage Densberger ... Kenmore, N. Y.
Edwin Crater Eaton Yadkinville
Donald Wilkerson Edwards Fort Mill, S. C.
Thomas Jackson Fowler Greensboro
William Clyde Friday Dallas
Daily Paul Gambill Independence, Va.
George Harper Glass, Jr. Greensboro
Thomas Allen Johnson, Jr. Liberty
**Paul Dudley Kaley .... Scranton, Pa.
Eubert Wesley McLeod Carthage
John Luther Morgan, Jr. Gibsonville
James Edward Odegaard Montclair, N. J.
Nathan Platt Strasburg, Va.
Thomas Benjamin Price West Jefferson
James Taylor Shotwell Henderson
Walter Aldine Thomason, Jr. Charlotte
James Ralph Wall East Bend
George Frank Watson Salisbury

IN WEAVING AND DESIGNING

Donald Julius Brown Cramerton
*Alma June Dickson Raleigh
William Garlon Holadia Roanoke Rapids
*Kenneth Albert Leer Hagerstown, Md.
William Barrier Morrison Concord
James Victor Neeley Greensboro
Charles Angelo Santore Hasbrouck Heights, N. Y.

ADVANCED DEGREES

MASTER OF SCIENCE

IN AGRICULTURAL ECONOMICS

John Thornton Glasse Eastern Transvaal, South Africa
Covert Salters McCallum Lugoff, S. C.

* Honors.
** High Honors.

IN CHEMICAL ENGINEERING

Lewis Fischer Drum . . . Catawba

IN DAIRY MANUFACTURING

Vittorio Sullam . . . Venice, Italy

IN ENTOMOLOGY

Samuel Kaufman . . New York, N. Y.
John Jacob Pratt, Jr. . . . Cohassett, Mass.
Stewart Claude Schell . . . York, Pa.

IN FIELD CROPS AND PLANT BREEDING

Edmund Broadus Browne . . . Raleigh
Julian Wade Farrior . . . Burgaw
Richard Marion Gibson . . . Gower, Mo.
Harold Frank Robinson . . . Bandana

IN OCCUPATIONAL INFORMATION AND GUIDANCE

Mrs. Grace Zimmerman Moen . . Raleigh

IN PLANT PATHOLOGY

William Francis Alston . . Pitman, N. J.

IN POULTRY SCIENCE

Lee Waldo Herrick, Jr. . . Northfield, N. J.

IN SOILS

Harold Donald Morris . . Raleigh
Norwood Rufus Page . . Lake View, S. C.
Charles Winfield Turner . . North Scituate, R. I.
William Walton Woodhouse, Jr. . . Raleigh

IN TEXTILES

Nathan Herman Goldberg . . Brooklyn, N. Y.
Samuel McGowan Littlejohn . . . Chapel Hill
Joseph Alexander Porter, Jr. . . . Rockingham
Ernesto Santos y Ventura . . Rizal, Philippine Islands

MASTER OF ANIMAL PRODUCTION

Roy Otis Lackey . . . Lenoir
Harvey Grant Snipes . . . Jackson

MASTER OF PLANT PATHOLOGY

David Lee Stoddard — Hyattsville, Md.

MASTER OF WILDLIFE CONSERVATION AND MANAGEMENT

Charles Ivy Bunn — Spring Hope
Wallace J. Majure — Decatur, Miss.
Mark Hughes Taylor — High Point

MASTER OF CHEMICAL ENGINEERING

Joseph Leonard Katz — Morganton
Charles Edward Littlejohn, Jr. — Raleigh
John Frank Seely — Chester, Pa.

MASTER OF CIVIL ENGINEERING

Robert Howell Grady — Kinston

MASTER OF ELECTRICAL ENGINEERING

John Franklin Gilmore — Oxford

MASTER OF AGRICULTURAL EDUCATION

Amos Gentry Bullard — Roxboro

PROFESSIONAL DEGREES

CHEMICAL ENGINEER

William Henry Ayscue — Wilmington, Del.

ELECTRICAL ENGINEER

Jefferson Clark Davis — Little Silver, N. J.
James Willard Southerland — Chattanooga, Tenn.
Isaac Norris Tull — Cleveland, Ohio

MASTER OF AGRICULTURE

Samuel C. Oliver, Jr. — Whiteville

HONORARY DEGREES

DOCTOR OF ENGINEERING

Roger Vernon Terry — Newport News, Va.

DOCTOR OF TEXTILE SCIENCE

Richard Thurmon Chatham — Winston-Salem

MEDALS AND PRIZES, SCHOLARSHIP DAY, 1941

ETA KAPPA NU AWARD

L. W. Long, Sophomore in Electrical Engineering,
Forest City, N. C.

GAMMA SIGMA EPSILON SCHOLARSHIP CUP

David S. Weaver, Jr., Junior in Chemical Engineering,
Raleigh, N. C.

SIGMA PI ALPHA AWARD

J. W. Willis, Senior in Electrical Engineering,
Memphis, Tenn.

ASSOCIATED GENERAL CONTRACTORS AWARD

Harrison W. Fox, Senior in Civil Engineering,
St. Petersburg, Fla.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS AWARD

E. L. Bryant, Junion in Chemical Engineering,
Wilmington, N. C.

MU BETA PSI (MUSICAL AWARD)

George H. Glass, Senior in Textile Manufacturing,
Greensboro, N. C.

ORDER OF 30 AND 3 AWARD

B. W. Greene, Freshman in Mechanical Engineering,
Elizabethtown, N. C.

J. C. STEELE SCHOLARSHIP CUP

Henry H. Thomas, Senior in Ceramic Engineering,
Durham, N. C.

MOLAND-DRYSDALE SCHOLARSHIP CUP

E. D. Cox, Freshman in Ceramic Engineering,
Charlotte, N. C.

NATIONAL ASSOCIATION OF TEXTILE MANUFACTURERS' MEDAL

P. D. Kaley, Senior in Textile Manufacturing,
Scranton, Pa.

SIGMA TAU SIGMA AWARD

P. D. Kaley, Senior in Textile Manufacturing,
Scranton, Pa.

PHI PSI KEY

R. I. Dalton, Jr., Sophomore in Textile Manufacturing, Charlotte, N. C.

TAU BETA PI AWARDS

Max Sayah, Sophomore in Chemical Engineering, Allentown, Pa.

B. W. Greene, Freshman, Mechanical Engineering, Elizabethtown, N. C.

ALPHA ZETA SCHOLARSHIP CUP

T. L. York, Sophomore in Agriculture, Waynesville, N. C.

INTERFRATERNITY SCHOLARSHIP CUP

Delta Sigma Phi Fraternity

ALUMNI ATHLETIC TROPHY

Howell W. Stroup, Senior, in Agricultural Education, Cherryville, N. C.

PHI KAPPA PHI CASH SCHOLARSHIP

H. A. Whitten, Jr., Graduate in Agricultural Chemistry, Glendale, S. C.

PHI KAPPA PHI SCHOLARSHIP MEDALS

Senior: Elia Sternberg, Senior in Civil Engineering, Vienna, Austria

Junior: C. B. Ratchford, Junior in Farm Business Administration, Gastonia, N. C.

Sophomore: Max Sayah, Sophomore in Chemical Engineering, Allentown, Pa.

KAPPA PHI KAPPA (EDUCATION) AWARD

D. S. Chamblee, Sophomore in Agricultural Education, Zebulon, N. C.

ELDER P. D. GOLD CITIZENSHIP MEDAL

John David Jones, Senior in Animal Production, Brevard, N. C.

DEGREES CONFERRED SEPTEMBER, 1941

BACHELOR OF SCIENCE

IN AGRICULTURAL CHEMISTRY

Ray Nelson Jarvis . . . Mars Hill

IN AGRICULTURAL ENGINEERING

Louis Bailey Trevathan . . Dobson
Henry Lewis Wall, Jr. . . Elams
Woodley Charles Warrick . . Clayton

IN ANIMAL PRODUCTION

*Paul Jamison Brown, Jr. . . Charlotte
*John Hardy LeGwin . . Wilmington

IN FARM BUSINESS ADMINISTRATION

**Hugh Chatham Kiger . . Pfafftown

IN FIELD CROPS AND PLANT BREEDING

Marion William Bowen . . Burgaw
John Currie Gibbs, Jr. . . . Pelham
Hasel LeRoy Meacham . Raleigh

IN FORESTRY

A. Wade Brown . . Rockwell
Eric Howard Ericson, Jr. Manchester, Mass.
Donald Fleetwood Traylor . . Raleigh

BACHELOR OF ARCHITECTURAL ENGINEERING

Marshall Pyne McDowell . . Goldsboro
Richard Haswell Mitchell . . Raleigh
Richard Lee Rice . Raleigh

BACHELOR OF CERAMIC ENGINEERING

James Rollins Sevier . . Asheville

BACHELOR OF CHEMICAL ENGINEERING

Meyer David Strong . . Raleigh

* Honors.
** High Honors.

BACHELOR OF ELECTRICAL ENGINEERING

James Roy Smith, Jr. . . . . Charlotte

BACHELOR OF GEOLOGICAL ENGINEERING

Kefton Harding Teague . . . . Siler City

BACHELOR OF MECHANICAL ENGINEERING, AERONAUTICAL OPTION

Ralph Harding Donnell . . . . Greensboro
Edwin Riley Johnson . . . . Paw Creek
William Duke Windley . . . . Belhaven

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION

Robert Marcus Dunn . . . . Rocky Mount
Ray Wooten Griffin . . . . La Grange
James Willis Johnson . . . . Erwin
Carl Evan Mauney . . . . Lincolnton
Marvin Bradly Smith . . . . Denton
*Robert Brady Thomas . . . . Oakboro

IN INDUSTRIAL ARTS EDUCATION

John Roy Barnette, Jr. . . . . Huntersville

IN TEXTILE CHEMISTRY AND DYEING

Edwin Forbes Glenn . . . . Greensboro
Clarence Franklin Gregory . . . . Richmond, Va.
B. Z. Routh, Jr. . . . . Greensboro

IN TEXTILE MANAGEMENT

Robert Stewart Hines . . . . Greensboro

IN TEXTILE MANUFACTURING

**Irwin Bloch . . . . New York, N. Y.
Buell Lothery Little . . . . Mooresville
Edgar Pace Moore . . . . Bynum
James Revis Scoggins . . . . Cramerton
George Washington Stowe, Jr. . . . . Belmont
James Edwin Williams . . . . Greenville

---

* Honors.
** High Honors.

IN WEAVING AND DESIGNING

Grover Washington Creech, Jr. — Concord

ADVANCED DEGREES

MASTER OF SCIENCE

IN AGRICULTURAL ECONOMICS

Ernest Earl Durham — Kernersville

IN ENTOMOLOGY

Ralph Craig Barnes — Summerfield, Ohio

IN TEXTILES

William Picot Crawley — Littleton

CERTIFICATES OF MERITORIOUS SERVICE

AUGUST 6, 1941

IN AGRICULTURE

Thomas Jefferson Winfield Broom — Monroe
John Wesley Kiker — Polkton
Alexander Oldham McEachern — Wilmington

INDEX

DIRECTORY

FACULTY, STAFF, and STUDENTS

OF

NORTH CAROLINA STATE COLLEGE OF

AGRICULTURE AND ENGINEERING

OF THE

UNIVERSITY OF NORTH CAROLINA

1941-1942

State College Station

Raleigh

OFFICERS OF ADMINISTRATION

FOR THE ACADEMIC YEAR 1941-1942

THE CONSOLIDATED UNIVERSITY

President of the Greater University	Frank Porter Graham
Controller	W. D. Carmichael, Jr.

N. C. STATE COLLEGE

Dean of Administration	Colonel J. W. Harrelson
President Emeritus	Eugene Clyde Brooks
Dean of Students	E. L. Cloyd
Director of Registration	W. L. Mayer
Treasurer	A. F. Bowen
Assistant Controller	J. G. Vann

FACULTY COUNCIL

Colonel J. W. Harrelson, Chairman	Dean of Administration
B. F. Brown	Dean of the Basic Division of the College
T. E. Browne	Director of the Division of Teacher Training
Wm. Hand Browne, Jr.	Head of the Department of Electrical Engineering
E. L. Cloyd, Secretary	Dean of Students
W. L. Mayer	Director of Registration and Purchasing Agent
Z. P. Metcalf	Director of Instruction, School of Agriculture and Forestry, and Chairman of Committee on Graduate Instruction.
Thomas Nelson	Dean of the Textile School
L. D. Baver	Director, Agricultural Experiment Station
I. O. Schaub	Dean of the School of Agriculture and Director of Agricultural Extension.
A. J. Wilson	Head of the Department of Chemistry
Blake R. Van Leer	Dean of the School of Engineering and Director of Instruction.

OTHER OFFICERS

Alumni Secretary	Dan M. Paul
Architect, Landscape	J. P. Pillsbury
Architect, College	Ross Shumaker
Athletics, Director	J. F. Miller
Athletics, Business Manager	J. L. Von Glahn
Dining Hall, Steward	L. H. Harris
Dormitories, Superintendent	T. T. Wellons
Dormitories, Chief Assistant	W. C. Friday
Engineer, College	L. L. Vaughan
Extension, Director	Edward W. Ruggles
Gymnasium, Custodian	C. N. Carroll
Laundry, Superintendent	W. L. Godwin
Librarian	H. C. Brown
Military, P. M. S. & T.	Colonel Thos. W. Brown
Music, Director	Major C. D. Kutschinski
Nurse, Head	Miss V. Harvard
Physician	Dr. A. C. Campbell
Power Plant, Superintendent	A. A. Riddle
Publicity, College Director	C. A. Upchurch, Jr.
Self-Help, Director	N. B. Watts
Service Department, Manager	W. F. Morris
Station Farms, Director	F. E. Miller
Y. M. C. A., General Secretary	Edward S. King

STANDING COMMITTEES

FOR THE SCHOOL YEAR 1941-1942

AGRICULTURAL SHORT COURSES

M. E. Gardner, Chairman
Dan M. Paul, Secretary
F. M. Haig
J. F. Lutz
C. F. Parrish
D. S. Weaver

ATHLETICS

H. A. Fisher, Chairman
A. J. Wilson, Secretary
Lodwick C. Hartley
I. O. Schaub
J. L. Stuckey

BUILDINGS AND GROUNDS

M. E. Gardner, Chairman
J. P. Pillsbury, Secretary
Harlan C. Brown
J. K. Coggin
T. R. Hart
Lodwick C. Hartley
J. V. Hofmann
D. A. Lockmiller
C. L. Mann
W. F. Morris
R. H. Ruffner
Ross Shumaker
I. V. D. Shunk
L. L. Vaughan
J. G. Weaver

COLLEGE EXTENSION

H. B. Briggs, Chairman
E. W. Ruggles, Secretary
C. H. Bostian
R. S. Dearstyne
T. R. Hart
A. I. Ladu
D. A. Lockmiller
William McGehee
C. G. Mumford
J. D. Paulson
S. R. Winston

DISCIPLINARY

F. W. Lancaster, Chairman
E. L. Cloyd, Secretary
R. S. Fouraker
R. P. Marshall
William McGehee
J. A. Rigney

DORMITORY TELEPHONES

W. C. Friday, Chairman
Ray Holder
L. M. Keever
W. F. Morris
N. B. Watts

FRATERNITY LIFE

R. C. Bullock, Chairman
E. L. Cloyd, Secretary
W. A. Bain
A. F. Greaves-Walker
B. E. Lauer
F. H. Lyell
J. F. Miller
E. M. Waller
L. F. Williams

FRESHMAN HOUSING

W. N. Hicks, Chairman
F. M. Haig
Lodwick C. Hartley
W. C. Friday
Ray Holder
J. S. Meares
C. C. Mumford
E. M. Waller

GRADUATE STUDIES

Z. P. Metcalf, Chairman
T. P. Harrison, Editor
L. D. Baver
T. E. Browne
Wm. Hand Browne, Jr.
J. W. Cell
J. B. Derieux
G. W. Forster
A. H. Grimshaw
C. H. Hamilton
T. P. Harrison
E. G. Hoefer
G. K. Middleton
G. Wallace Smith
L. L. Vaughan
B. W. Wells
L. F. Williams

JOBS AND SELF-HELP

F. B. Wheeler, Chairman
N. B. Watts, Secretary
J. D. Clark
E. L. Cloyd
L. H. Harris
W. F. Morris
Williams Newton
R. H. Ruffner

LIBRARY

A. I. Ladu, Chairman
Harlan C. Brown, Secretary
D. B. Anderson
C. R. Bramer
J. W. Cell
J. M. Clarkson
A. H. Grimshaw
P. H. Harvey
D. A. Lockmiller
J. R. Ludington
William McGehee
T. B. Mitchell
G. H. Satterfield
J. L. Stuckey
L. L. Vaughan

LOANS

E. L. Cloyd, Chairman
A. F. Bowen, Secretary
W. L. Mayer
C. B. Shulenberger

PUBLIC LECTURES

L. E. Hinkle, Chairman
L. O. Armstrong
L. D. Baver
R. C. Bullock
E. L. Cloyd
R. S. Dearstyne
W. C. Friday
C. H. Hamilton
Lodwick C. Hartley
A. C. Hayes
E. G. Hoefer
E. S. King
C. D. Kutschinski
D. A. Lockmiller
R. B. Rice
G. H. Satterfield
J. L. Stuckey
C. A. Upchurch
B. W. Wells

Student Members

G. R. Sedberry, Jr.
M. K. Banks
W. H. Blue
W. E. Bryant
W. E. Carter
M. J. Clay
O. M. Gardner, Jr.
E. L. Hardin, Jr.
W. F. LeGrand
G. K. McAdams
W. D. Robbins
C. D. Sickerott
Jacob Tinga
B. F. Vaughan
W. W. Wommack
L. P. Zachary, Jr.

REFUND OF FEES

E. L. Cloyd, Chairman
A. F. Bowen
W. L. Mayer
J. G. Vann

RESEARCH

Z. P. Metcalf, Chairman
L. D. Baver
Wm. Hand Browne, Jr.
E. R. Collins
J. B. Derieux
A. H. Grimshaw
C. D. Grinnells
C. H. Hamilton
Jack Levine
J. F. Lutz
R. O. Moen
R. B. Rice
G. H. Satterfield
R. L. Stone
J. L. Stuckey
B. W. Wells

SOCIAL FUNCTIONS

F. M. Haig, Chairman
E. L. Cloyd, Secretary
G. R. Culberson
J. F. Miller
R. H. Ruffner
G. Wallace Smith

Student Members

W. H. Blue
E. L. Bryant
P. E. Collins
R. L. Daughtridge
E. B. Dawson
O. Max Gardner, Jr.
J. A. Graham
W. R. Ivey, Jr.
Dudley Robbins

STUDENT GOVERNMENT

J. L. Stuckey, Chairman
E. W. Boshart
E. L. Cloyd
A. H. Grimshaw
W. N. Hicks
F. W. Lancaster
C. B. Shulenberger

STUDENT PUBLICATIONS BOARD

F. H. Jeter, Chairman
Gene Knight
R. P. Marshall
W. L. Mayer
C. A. Upchurch, Jr.

Student Members

Roderick Adams
W. P. Brewer
Marvin J. Clay
W. A. Crombie
R. W. Dalrymple
Scott Ferebee
J. A. Graham
J. E. Hobbs
J. E. MacDougall
Harry Muller
J. L. Randolph
Dudley Robbins
Carl Sickerott
Pickett Turner

STUDENT WELFARE

Lodwick C. Hartley
A. C. Campbell
J. D. Clark
F. M. Haig
William McGehee
C. G. Mumford
C. B. Shulenburg
J. L. Stuckey

Student Members

A. A. Banadyga
Mason Banks
J. E. Hobbs
G. W. Jones
C. K. McAdams
Dudley Robbins
C. R. Sedberry, Jr.
Carl Sickerott

TRAFFIC

W. F. Morris, Chairman
J. P. Pillsbury, Secretary
J. W. Goodman
W. H. Hoffman
B. R. Van Leer

DORMITORY TELEPHONES

Location	*2-2853 Extension*
4th	6
5th	7
6th	8
7th	9
7th, 2nd floor	10
7th, 3rd floor	11
8th, Basement	23
8th, 1st floor	12
8th, 2nd floor	13
8th, 3rd floor	14
9th	15
10th	16
1911	23
A, 1st floor	17
A, 2nd floor	18
A, 3rd floor	19
C, 1st floor	20
C, 2nd floor	21
C, 3rd floor	22
South, 1st floor	1
South, 2nd floor	2
South, 3rd floor	3
Watauga, 1st floor	4
Watauga, 3rd floor	5
Friday, W. C.	24

Operating Schedule:

Monday through Friday: 12 Noon to 11 p.m.
Saturday and Sunday: 12 Noon to 4:00 p.m.; and 6:00 to 10:00 p.m.

Incoming Calls:

Dial 2,2853. When operator answers, give the extension or floor and dormitory desired.

Inter-Dormitory Calls:

Give operator dormitory and floor desired.

Note: The dormitory switchboard is separate from the regular College board. To call from a College extension it will be necessary to dial Outside 2-2853.

DORMITORY ASSISTANTS

1941-1942

W. C. FRIDAY, Chief Assistant

107 Ninth Dormitory

OFFICE HOURS:

12:30 to 4:00 p.m. 7:30 to 11:00 p.m.

Name of Counselor	*Room*
Clevenger, W. L., State College N. C.	208 4th
Regan. P. R., Lexington, N. C.	201 5th
Ferebee, H. C., Camden. N. C.	201 6th
Carney, J. F., Bethel, N. C.	111 7th
Clay, M. J., Hester. N. C.	125 7th
Gibson, A. E., Greenville, N. C.	211 7th
Corbin, W. L., Otto, N. C.	225 7th
Caton, J. C., Concord, N. C.	311 7th
Bryant, E. L.. Wilmington. N. C.	325 7th
Levin, E. J.. Mount Iron, Minn.	9 8th
Phillips, K. L., Maysville. N. C.	23 8th
Tabscott, Jack, Washington, D. C.	109 8th
McClain, E. F., Mathiston, Miss	126 8th
Jones, G. W., Roxboro, N. C.	209 8th
Martin, J. D., Roanoke, Va.	226 8th
Wommack, W. W., Winston-Salem, N. C.	309 8th
McKinne, Collin, Louisburg, N. C.	326 8th
Bryant, W. E., Wilmington. N. C.	206 9th
Martin, M. D., Liberty, N. C.	306 9th
Boyce, R. D., Woodland. N. C.	109 10th
Zachary, L. P., Taylorsville, N. C.	117 "A"
Turner, Tom M., Washington, D. C.	217 "A"
Patterson. Q. W., Hiddenite. N. C.	317 "A"
Sutton, W. M., Rocky Mount, N. C.	117 "C"
Hetherington, I. J., Baltimore, Md.	217 "C"
Young, M. P., Princeton, N. C.	317 "C"
Riddick, R. G., Corapeake, N. C.	22 South
Constant, L. A., Grafton, Mass.	116 South
Sedberry, G. R., Concord, N. C.	216 South
Miller, H. L., Mooresville, N. C.	316 South
Cameron, H. C., Oxford, N. C.	103 Watauga
Ferree, H. G., High Point, N. C.	203 Watauga
Colenda, Frank, Morehead City, N. C.	303 Watauga
Barr, J. D., Charlotte, N. C.	239 "A"
Owens, F. A., Charlotte, N. C.	239 "A"
Clark, Foy, Mount Airy, N. C.	116 "C"
Fitchett, C. E., Dunn, N. C.	118 "C"

COLLEGE TELEPHONES

Agriculturist	2-3370
Agromeck	9909
Dining Hall	2-0243
Fieldhouse	6934
Infirmary	7615
Southern Engineer	2-3370
Student Government	8738
Technician	4732
Wataugan	2-3370
Y. M. C. A.	7184
Von Glahn, J. L.	2-2407

FRATERNITY ROSTER

1941-1942

Organization		*Address*	*Telephone*
Alpha Gamma Rho	(Nat'l)	2008 Hillsboro Street	2-1137
Alpha Kappa Pi	(Nat'l)	6 Ferndell Lane	4035
Alpha Lambda Tau	(Nat'l)	10 Enterprise Street	7016
Delta Sigma Phi	(Nat'l)	2004 Hillsboro Street	2-1873
Kappa Alpha	(Nat'l)	2405 Clark Avenue	2-0737
Kappa Sigma	(Nat'l)	21 Enterprise Street	2-0232
Lambda Chi Alpha	(Nat'l)	2407 Clark Avenue	8218
Phi Kappa Tau	(Nat'l)	104 Logan Court	7422
Pi Kappa Alpha	(Nat'l)	4 Ferndell Lane	5022
Pi Kappa Phi	(Nat'l)	1720 Hillsboro Street	4215
Sigma Alpha Mu	(Nat'l)	2304 Clark Avenue	7638
Sigma Nu	(Nat'l)	1301 Hillsboro Street	2-1972
Sigma Phi Epsilon	(Nat'l)	103 Chamberlain Street	4843
Sigma Pi	(Nat'l)	2513 Clark Avenue	2-0268

FACULTY DIRECTORY

1941-1942

Abrams, Virginia B.—Secty., Teach. Ed. 103 Tompkins. Ext. 257.
Residence: 721 Bloodworth St. Telephone 2-0183.

*Adams, A. H.—Clerk, Central Stores. Warehouse. Ext. 272.
Residence: Clayton, N. C. Telephone 2751.

Adams, Hazel C.—Stenog., Hort. 304 Polk. Ext. 275.
Residence: 2602 Clark Ave. Telephone 8221.

*Adams, W. E. Asst. Prof., M.E. 206 Page. Ext. 247.
Residence: 3413½ Hillsboro. Telephone 2 1393.

Agricultural Adjustment Administration. West Dining. Telephone 2-0544.
E. Y. Floyd, State Executive Officer In Charge.

Allen, Laeta (Mrs.)—Stenog., Farm Mgt. 303-1911. Ext. 291.
Residence: 4½ Rosemary.

Altman, Margaret—Secty., R.S. 101 1911. Ext. 312.
Residence: 1210 Cowper Dr. Telephone 2 3204.

*Ammerman, J. P., Jr.—Herdsman, A. H. 215 Polk. Ext. 276.
Residence: A. H. Farm.

*Alford, A. O.—Asst. Ed., Publications Ext. 23 Ricks. Ext. 254.
1904½ Hillsboro. Telephone 2-1422.

*Altman, L. B.—Dist. Agent, Agr. Ext. 103 Ricks. Ext. 212.
Residence: 1210 Cowper Dr. Telephone 2-3204.

*Anderson, D. B.—Prof., Bot. 212 Winston. Ext. 267.
Residence: 906 Brooks Ave. Telephone 2-3061.

Anderson, R. L.—Instr., Math. 206 Tompkins. Ext. 226.
Residence: 107 Chamberlain. Telephone 7468.

Andrews, B. G. Field Agent, Agr. Ec. 122-1911. Ext. 308.
Residence: 202 Groveland. Telephone 3-2459.

Andrews, H. P. Tch. Fel., Ch. 19 Winston.
Residence: 303 Fourth. Telephone 2-2853.

Arant, Anamerle—N. W. Dist., Home Dem. Agent, Agr. Ext. 201-1911. Ext. 285.
Residence: 1821 Glenwood. Telephone 8089.

Arey, J. A. In Charge, Dairy Ext. 118 Polk. Ext. 277.
Residence: 5 Maiden Lane. Telephone 2-3535.

*Armstrong, L. O. Asso. Prof., Teach. Ed. 117 Tompkins. Ext. 256.
Residence: 308 Dixie Trail. Telephone 2-0063.

Arrington, L. J. Instr., Econ. 104 Peele. Ext. 223.
Residence: 2706 Kilgore.

Atkins, Mrs. Rupert E.—Stenog., Ext. Market. 124 1911. Ext. 306.
Residence: 3021 Eton Rd. Telephone 2 0989.

Aycock, Robert Res. Fel., Bot. 204 Winston. Ext. 267.
Residence: 106 Horne. Telephone 2-1887.

*Babcock, W. F. Instr., C. E. 209 C. E. Ext. 303.
Residence: 1702 Hillsboro. Telephone 6825.

*Badders, Hal—Asst. Supt., Service Dept. Power Plant. Ext. 234.
Residence: 2402 Everett Ave. Telephone 6814.

Bailey, E. A.—Chem. Res. Fel., Dairy. 210 Polk. Ext. 305.
Residence: 202 Fourth. Telephone 2-2853.

Bailey, Janie R.—Secty., M. E. 109 Page. Ext. 246.
Residence: 2232 Hillsboro. Telephone 9814.

*Bain, W. A., Jr.—Asst. Prof., Ch. E. 107 Winston. Ext. 301.
Residence: U-1 Raleigh Apts. Telephone 2-0010.

*Baker, Mrs. Allen L. P.B.X. Operator. 117 Winston.
Residence: 518 N. Bloodworth. Telephone 4143.

*Ballenger, Stanley T. Asst. Prof., M. L. 213 Peele. Ext. 231.
Residence: 2714 Rosedale. Telephone 9570.

Barker, Nell Asst. Controller. 106 Holladay. Ext. 278.
Residence: P-1-A Cameron Ct. Apts. Telephone 3-2284.

*Barker, W. J. Ext. For. 307 Ricks. Ext. 270.
Residence: 9 Pogue. Telephone 2-3885.

Barnes, J. I., Jr. Sr. Accountant, Voc. Ed. 109 Tompkins. Ext. 311.
Residence: Clayton, N. C. Telephone 243-6.

*Barnes, Mrs. Mamie L.—Warp Drawer, Tex. Tex. Ext. 273.
Residence: 1904½ Hillsboro. Telephone 2-2567.

*Barnes, R. C.—Res. Fel., Zool. 105 Zoology. Ext. 239.
Residence: 119 Montgomery. Telephone 8006.

*Barnes, Mrs. R. C. Stenog., Col. Ext. 201 Library. Ext. 260.
Residence: 119 Montgomery. Telephone 8006.

*Barnhardt, Luther W. Asso. Prof., Hist., Pol. Sc. 102 Peele. Ext. 223.
Residence: 2502 Stafford. Telephone 8796.

Bartlett, G. W. Asst. Prof., Phys. 108 Daniels. Ext. 229.
Residence: B-2-A Cameron Court Apts. Telephone 2-3069.

*Bauerlein, George Asst. Prof., Hist. 107 Peele. Ext. 223.
Residence: 310 Pogue.

Baumgarten, W. L. Asst. Prof., Arch. 309 Daniels. Ext. 250.
Residence: 2509 Country Club Rd. Telephone 7486.

*Baver, L. D.—Director, Exp. Sta. 107 Ricks. Ext. 211.
Residence: 1902 Stone. Telephone 2-3741.

Bell, T. A. Cooperative Agent. U.S.D.A. 312 Polk. Ext. 206.
Residence: 202 Fourth Dorm. Telephone 2-2853, Ext. 6.

Bennett, L. S.—Asst. Agron. 18 Withers. Ext. 263.
Residence: 114 Park Ave Apts. Telephone 5303.

Benton, A. J. Res. Fel., Agron. 315 Ricks. Ext. 207.
Residence: 114 Horne. Telephone 4987.

*Berkut, M. K.—Tch. Fel., Chem. 19 Withers.
Residence: Westover, Rt. 4. Telephone 2-1094.

*Bessey, W. H. Instr., Phys. 208 Daniels. Ext. 229.
Residence: 2 Logan Ct. Telephone 2-2673.

Betts, Grace E.—Stat. Clerk, Ext. 108 Ricks. Ext. 255.
Residence: 1814 Park Dr. Telephone 2-3698.

*Biggers, P. T.—Res. Asso., U. S. Tex. Res. Tex. Ext. 273.
Residence: 2 S. McDowell.

*Biggs, V. L. (Mrs.)—Clerk, Pub. 5 Ricks. Ext. 279.
Residence: 3208 Merriman Ave. Telephone 5689.

*Bishop, Mrs. L. W.—Secty., Y. M. C. A. Y. M. C. A. Telephone 7184.
Residence: 2900 Hillsboro. Telephone 2-0402.

Blair, E. C.—Ext. Agron. 204 Ricks. Ext. 294.
Residence: 125 Glenwood Ave. Telephone 2-1388.

Bledsoe, E. B.—Stenog. 201 Daniels. Ext. 236.
Residence: Brooks Ave. Telephone 2-0688.

Bledsoe, M. C. M. Secty., A. H. 115 Polk. Ext. 268.
Residence: Brooks Ave. Telephone 2-0688.

Boshart, E. W. Prof., Teach. Ed. 101 Tompkins. Ext. 258.
Residence: F-1-B Cameron Ct. Apts. Telephone 2-2745.

Bostian, C. H.—Assoc. Prof., Zool. 109 Zoology. Ext. 239.
Residence: Box 5215 Col. Sta. Telephone 2-3600.

Bowen, A. F. Treasurer. 108 Holladay. Ext. 295.
Residence: 20 Ferndell Lane. Telephone 5334.

Brady, Hilda—Ext. Artist. 23 Ricks. Ext. 254.
Residence: 201 Chamberlain. Telephone 2-1143.

Brady, N. C. Res. Fel., Agron. 9 Withers. Ext. 209.
Residence: 2112 Country Club Dr. Telephone 7484.

Bragg, Annabelle H. Secty., Stat. 340-1911. Ext. 313.
Residence: 1615 Hillsboro. Telephone 7502.

Bragg, Francis C. Instr., M. E. 207 Page. Ext. 247.
Residence: 1615 Hillsboro. Telephone 7502.

Bramer, C. R.—Asso. Prof., C. E. 209 C. E. Ext. 303.
Residence: B-6 Raleigh Apts. Telephone 6567.

Brickhouse, C. M. Dist. Agent, Agr. Ext. 101 Ricks. Ext. 212.
1013 Harvey. Telephone 9585.

Bridge, M. P.—Tch. Fel., Teach. Ed. 105 Tompkins. Ext. 311.
Residence: 3107 Hillsboro. Telephone 3 1889.

Bridges, W. S. Asso. Prof., M. E. 107 Page. Ext. 246.
Residence: 125 Chamberlain. Telephone 4159.

Briggs, Hermon B. Prof., M. E. 206 Page. Ext. 247.
Residence: 128 Groveland. Telephone 2-1030.

Briggs, James E.—Res. Fel., A. H. 216 Polk. Ext. 276.
Residence: 322 Cutler. Telephone 5895.

Brigman, H. P. Clerk, Poul. 214 Ricks. Ext. 280.
Residence: 213 N. Bloodworth. Telephone 5940.

Brigman, Mrs. H. P. Stat. Clerk, Agr. Ec. 110 1911. Ext. 309.
Residence: 213 N. Bloodworth. Telephone 5940.

Brooks, Dr. E. C. President Emeritus.
Residence: 630 N. Bloodworth.

Brooks, J. M. Night Nurse. Infirmary. Telephone 7611.
Residence: 1306 Mordecai Dr. Telephone 2 1169.

Brooks, Sallie Asst. Nutritionist, Agr. Ext. 218 1911. Ext. 242.
Residence: B-102 Boylan Apts. Telephone 9535.

Brooks, Virginia P.B.X. Operator. Y. M. C. A. Telephone 2-2853.
Residence: 1306 Mordecai Dr. Telephone 2 1169.

Broome, Alice—Stenog., Voc. Ed. 108-9 Tompkins. Ext. 311.
Residence: 2-G Edenhall Apts. Telephone 3 1453.

Brown, B. F.—Dean, Basic Div. 101 Peele. Ext. 223.
Residence: 801 N. Bloodworth. Telephone 2-0382.

Brown, H. C. Librarian. Library. Ext. 259.
Residence: 2100 Hillsboro. Telephone 5985.

Brown, P. J., Jr. Grad. Asst., A. H. 102 Polk. Ext. 268.
Residence: 302 Fourth Dorm. Telephone 2-2853, Ext. 6.

Brown, R. R., Asso. Prof., E. E. 104 Daniels. Ext. 235.
Residence: 1520 Carr. Telephone 8924.

Brown, T. C.—Asst. Prof., M. E. 106 Page. Ext. 246.
Residence: 910 Canterbury Rd. Telephone 2-3277.

Brown, T. L. Res. Fel., Agron. 111 Polk. Ext. 220.
Residence: 114 Horne. Telephone 4987.

Brown, T. T. Ext. Poultryman. 210 Ricks. Ext. 294.
Residence: 1709 Bickett Blvd. Telephone 9731.

Brown, T. W. Col., U. S. Army, PMS&T. 2 Holladay. Ext. 233.
Residence: 129 Forest Rd. Telephone 2-3507.

Browne, T. E. Director, Teach. Ed. 120 Tompkins. Ext. 256.
Residence: 1715 Park Dr. Telephone 6151.

Browne, W. H., Jr. Prof., Head E. E. 203 Daniels. Ext. 236.
Residence: Dixie Trail. Telephone 5201.

Bryan, Rose E. Home Dem. Agent. 208-1911. Ext. 244.
Residence: Durham, N. C. Telephone F-9452.

Buell, M. F. Asst. Prof., Bot. 201 Winston. Ext. 267.
Residence: 911 Brooks Ave. Telephone 2-2112.

Bullock, R. C.—Asso. Prof., Math. 218 Tompkins. Ext. 228.
Residence: Dixie Trail. Telephone 7127.

Bunn, J. C. Instr., Math. 209 Tompkins. Ext. 226.
Residence: 16 Enterprise. Telephone 2-2247.

Burke, Maude—Secty., Purchasing. Holladay. Ext. 230.
Residence: 2008 McCarthy. Telephone 2-1512.

Burkhart, Leland Asst. Agron. 6 Withers. Ext. 209.
Residence: 5 Pogue. Telephone 3-2320.

Cameron, K. W.—Instr., Eng. 7 Pullen. Ext. 237.
Residence: 117 Cox Ave. Telephone 6496.

Campbell, Dr. A. C.—Col. Physician. Infirmary. Telephone 7615.
Residence: 302 Hawthorne Rd. Telephone 6849.

*Carmichael, W. D., Jr.—Controller, Consolidated Univ. 102 Holladay. Ext. 315.
Residence: Chapel Hill, N. C. Telephone 4141.

*Carroll, C. N.—Custodian, Gym. Gymnasium. Telephone 2-2407.
Residence: 2012 Fairview Rd.

Carter, Mary E.—Stenog., Hort. 302 Polk. Ext. 275.
Residence: 327 Oakwood Ave. Telephone 2-3305.

*Case, L. I.—Ext., A. H. 203 Polk. Ext. 269.
Residence: 1425½ Park Dr. Telephone 2-0198.

Cell, J. W.—Asso. Prof., Math. 218 Tompkins. Ext. 228.
Residence: 602 Dixie Trail. Telephone 2-2528.

Chadbourn, C. C., Jr.—Instr., Eng. 4 Pullen. Ext. 237.
Residence: 2702 Mayview Rd. Telephone 2-3423.

*Chalfant, J. W. Asst. Prof., For. 303 Ricks. Ext. 270.
Residence: 2704 Clarke Ave.

Chambers, C. L.—Supply Store. Y. M. C. A. Ext. 225.
Residence: 2202 Hillsboro St. Telephone 4509.

Chapman, W. H.—Asst., Agron. 117 . . . . , Ext. 262.
Residence: 6 Enterprise. Telephone 4788.

*Cheatham, J. C.—Instr., M. E. 104 Page. Ext. 246.
Residence: 507 W. Whitaker Mill Rd. Telephone 8435.

Chronister, B. S.—Res. Fel., Agron. 116 Ricks. Ext. 262.
Residence: 114 Horne. Telephone 4987.

*Clapp, Byron S.—1st Lt., U. S. Army, Asst. PMS&T. 4 Holladay. Ext. 233.
Residence: O-1, Raleigh Apts. Telephone 3-2476.

*Clark, J. D.—Prof., Eng. 106 Pullen. Ext. 237.
Residence: 15 Furches. Telephone 7385.

*Clarkson, J. M.—Asso. Prof., Math. 206 Tompkins. Ext. 226.
Residence: 2705 Barmettler. Telephone 8762.

*Clevenger, Mrs. Reba D.—Ref. Librarian. Library. Ext. 259.
Residence: 305 Calvin Rd. Telephone 8141.

Clevenger, W. L.—Prof., A. H. 211 Polk. Ext. 276.
Residence: 208 Fourth Dorm. Telephone 2-2853, Ext. 6.

*Cloyd, E. L. Dean of Students. 100 Holladay. Ext. 215.
Residence: 2224 Hillsboro. Telephone 5983.

Coffey, Christine L.—Catalog Librarian. Library. Ext. 259.
Residence: 205 Woodburn Rd. Telephone 2-1698.

Coffey, Thelma W. (Mrs.) Stenog., Farm Mgt. 306-1911. Ext. 291.
Residence: 304 Duncan. Telephone 3-1824.

*Coggin, J. K.—Prof., Teach. Ed. 104 Tompkins. Ext. 257.
Residence: Cary, N. C. Telephone 2482.

Coleman, R. F.—Tch. Fel., C. E. 208 C. E. Ext. 303.
Residence: 20 Logan Ct. Telephone 6219.

Collins, E. C. Res. Asst., R. S. 101-1911.
Residence: 8½ Maiden Lane. Telephone 2-1027.

*Collins, E. R., Asso. Agron. 120 Ricks. Ext. 262.
Residence: 2713 Rosedale. Telephone 9715.

*Collins, P. E.—Instr., Ch. 317 Withers.

Conley, Mabel C.—Secty., For. 301 Ricks. Ext. 270.
Residence: 15 Enterprise. Telephone 8433.

*Conner, N. W.—Assoc. Prof., E. M. 101 C. E. Ext. 317.
Residence: 2719 Bedford Ave. Telephone 4924.

*Cook, L. E.—Prof., Teach. Ed. 118 Tompkins. Ext. 256.
Residence: 111 Brooks Ave. Telephone 2-1234.

*Cooke, H. C.—Instr., Math. 221 Tompkins. Ext. 228.
Residence: 1201 Hillsboro.

*Cope, R. L.—Asst. Prof., M. E. M. E. Shops. Ext. 245.
2 Logan Ct. Telephone 2-2673.

Cox, Gertrude M.—Prof., Head Stat. 339-1911. Ext. 313.
Residence: R-2-A Cameron Ct. Apts. Telephone 5962.

Cox, Gladys—Secty., Dean of Students. 103 Holladay. Ext. 215.
Residence: 220 N. East. Telephone 2-2533.

Cox, Mabel—Cashier, Boarding. Cafeteria.
Residence: 120 Groveland Ave. Telephone 2-0243.

*Cox, Paul M.—Machinist, Tex. Tex. Ext. 287.
Residence: 13 W. Dixie Dr. Telephone 2-1940.

Cox, R. S.—Res. Fel., Bot. 220 Winston. Ext. 267.
Residence: 213 Woodburn Rd. Telephone 6656.

*Crawford, J. W.—Agr. Plan., Ext. Ser. 316-1911. Ext. 292.
Residence: 3204 Clark Ave. Telephone 5050.

*Creech, W. P.—Asst. Supt., Laundry. Laundry. Ext. 283.
Residence: 2402 Clark Ave. Telephone 3-1484.

*Crowder, W. G.—Asst. Poul. Poul. Plant.
Residence: Poul. Plant. Telephone 8686.

Culberson, G. R. Instr., Tex. Tex. Ext. 287.
Residence: 219 Oberlin Rd. Telephone 7987.

Current, Ruth—State Home Dem. Agent, Ext. 206-1911. Ext. 244.
Residence: S 5 Raleigh Apts. Telephone 6169.

*Davis, Mrs. Gertrude S.—Secty., Tex. 1st floor, Tex. Ext. 273.
Residence: 2230 Hillsboro. Telephone 2-1565.

Davis, Peggy—Stenog., Dean of Students. 101 Holladay. Ext. 215.
Residence: 2230 Hillsboro. Telephone 2-1565.

*Davis, P. H. Instr., Eng. 4 Pullen Hall. Ext. 237.
Residence: W 1 B Cameron Ct. Apts. Telephone 4827.

*Dean, N. T. Asst. Pressman, Print Shop. Tompkins Hall. Ext. 281.
Residence: Rt. 3, Box 54.

*Dearstyne, R. S. Prof., Head Poul. Sc. 216 Ricks. Ext. 280.
Residence: 2509 Fairview Rd. Telephone 2-2764.

*Derieux, J. B. Prof., Phys. 110 Daniels. Ext. 229.
Residence: 2802 Hillsboro. Telephone 2-0916.

*Dew, Mrs. J. L. Secty., Regional Advisor, ESMDT. 122 C. E. Ext. 216.
Residence: 211 N. Dawson. Telephone 6285.

*Doak, C. G.—Asst. Prof., P. E. Gym. Ext. 218.
Residence: 120 Woodburn Rd. Telephone 2-3701.

*Doody, T. C. Asst. Prof., Ch. E. 105 Winston. Ext. 301.
Residence: 12½ Enterprise. Telephone 5884.

Doub, Miriam Stenog., Ext. 104 Ricks. Ext. 213.
Residence: 2528 White Oak Rd. Telephone 6790.

Douglass, Dolly Secty., Ae. E. Aero. Lab. Ext. 248.
Residence: 1924 St. Mary's. Telephone 2-1615.

Dudley, Inez—Secty., Ext. For. 307 Ricks. Ext. 270.
Residence: 1218 Glenwood. Telephone 8898.

Eastman, Claire—Secty., M. L. 205 Peele. Ext. 231.
Residence: 1002 W. South. Telephone 6291.

Eller, Emily M. Stenog., E. E. 201 Daniels. Ext. 236.
Residence: Wilmington Terrace.

*Ellis, D. E. Asst., Bot. 202 Winston. Ext. 267.
Residence: 324 Shepherd. Telephone 2-2239.

*Ellis, H. M.—Ext. Agr. Engr.—318 Ricks. Ext. 274.
Residence: 2706 Hazelwood Dr. Telephone 5887.

Elrod, L. E. Tch. Fel., Ch. 207 Ch. Ext. 264.
Residence: 101 Fourth Dorm. Telephone 2-2853, Ext. 6.

*Etchells, J. L.—Asso. Bacteriologist, USDA. 312 Polk. Ext. 206.
Residence: P-9 Raleigh Apts. Telephone 6740.

Etheridge, Pauline F.—Stenog., Agr. Ext. 213-1911. Ext. 221.
Residence: 1305 Fillmore. Telephone 4465.

Evans, R. M. Res. Fel., Agron. 7 Withers. Ext. 209.
Residence: 106 Fourth Dorm. Telephone 2-2853, Ext. 6.

Farlow, J. N.—Instr., E. M. 204 C. E. Ext. 303.

Farm Security Administration. Patterson. Telephone 2-2811.

*H. H. Gordon, Director.

*Farnham, F. R.—Ext. Dairyman. 113 Polk. Ext. 277.
Residence: Mecklenberg Hotel, Charlotte, N. C.

Feezor, W. L. Tch. Fel., Ch. 322 Withers. Ext. 297.
Residence: 301 Fourth Dorm. Telephone 2-2853.

*Ferguson, B. T.—Dist. Agent, Agr. Ext. 103 Ricks. Ext. 212.
Residence: 2405 White Oak Rd. Telephone 2-0617.

Finkner, A. L.—Res., Stat. & U.S.D.A. 334 1911. Ext. 313.
Residence: 202 Groveland Ave. Telephone 3-2459.

*Fisher, H .A.—Prof., Head Math. 201 Tompkins. Ext. 227.
Residence: 125 Brooks Ave. Telephone 4138.

Fleming, Margaret K. Sr. Stat., Clerk, Agr. Ec. 335-1911. Ext. 313.
Residence: C-301 Boylan Apts. Telephone 3-1458.

*Floyd, E. Y. Tobacco Specialist, Ext.; and State Exec. AAA. Dining Hall. Telephone 2-0544, 2-0545.
Residence: 125 Glenwood Ave. Telephone 2-1388.

*Fontaine, James Asso. Prof. C. E. 202 C. E. Ext. 303.
Residence: 2712 Everett Ave. Telephone 2 0773.

*Forbes, E. H.—Foreman, A. H. 215 Polk. Ext. 276.
Residence: A. H. Farm.

*Fornes. G. G., Capt., U. S. Army, Asst. PMS&T. 14 Holladay. Ext. 314.
Residence: Knightdale, N. C.

*Forster, G. W. Prof., Agr. Ec. 117-1911. Ext. 308.
Residence: 1924 Sunset Ave. Telephone 2 1361.

Fort, Nellie Secty., A. H. 215 Polk. Ext. 276.
Residence: 315 N. Boundary. Telephone 6108.

*Foster, J. E. Prof. A. H. 218 Polk. Ext. 276.
Residence: 2706 Rosedale Ave. Telephone 9881.

Fountain, A. M. Asso. Prof., Eng. 101 Pullen. Ext. 237.
Residence: 900 Canterbury Rd. Telephone 3-1055.

*Fouraker, R. S.—Prof., E. E. 102 Daniels. Ext. 235.
Residence: 601 Brooks Ave. Telephone 6347.

*Fox, John W. Asst. Ext. Ed. 9 Ricks. Ext. 279.
Residence: 113 Chamberlain. Telephone 2-1381.

Freeman, Doris H. Stenog., Basic Div. 105 Peele. Ext. 223.
Residence: Boylan Apts. Telephone 2-1438.

*Fretz, J. B.—Lab. Engr., Ae. E. Aero. Lab. Ext. 248.
Residence: Morrison Ave. Telephone 5072.

Friday, W. C.—Chief Dorm. Asst. 107 Ninth. Telephone 2-2853.
Residence: 107 Ninth Dorm. Telephone 2-2853, Ext. 24.

*Friedrich, W. G.—Asso. Prof., Ae. E. Ae. Lab. Ext. 248.
Residence: 123 Woodburn Rd. Telephone 3-1078.

*Fulghum, J. S., Jr. Cashier, Business Of. 109 Holladay. Ext. 278.
Residence: 1208 Brooks Ave. Telephone 5868.

Fulghum, Naomi—Stenog., Library. Library. Ext. 259.
Residence: 305 Calvin Rd. Telephone 8141.

*Fulton, B. B.—Res. Entom. 208 Zool. Ext. 261.
Residence: 600 Brooks Ave. Telephone 2-1868.

*Gardner, M. E.—Prof., Head Hort. 304 Polk. Ext. 275.
Residence: 2708 Bedford Ave. Telephone 4178.

*Garodnick, I. O.—Instr., M. L. 205 Peele. Ext. 231.
Residence: State College. Telephone 9927.

Garrett, E. B.—State Coordinator, Soil Con. Ser. 205 Polk. Ext. 4832.
Residence: 223 Hawthorne Rd. Telephone 4328.

Garriss, H. R.—Ext. Plant Pathol. 202 Winston. Ext. 267.
Residence: 2713 Bedford Ave. Telephone 2-3638.

Gaskill, A. C. Asst. Steward, Boarding. Cafeteria.
Residence: Cafeteria Bldg. Telephone 2-0243.

Gauger, H. C. Asst. Prof., Poul. 218 Ricks. Ext. 280.
Residence: 2724 Van Dyke. Telephone 2 3020.

Gaylord, C. N. Instr., E. M. 204 C. E. Ext. 303.
Residence: 801 Chamberlain.

Gelbart, Abe. Instr., Math. 206 Tompkins. Ext. 226.
Residence: 5 Cameron Park Apts. Telephone 9921.

Gibson, Harvey T. Instr., Eng. 8 Pullen. Ext. 237.
Residence: 812 E. Dr. Telephone 8044.

Gibson, P. J. Asst., Agron. 120 Ricks. Ext. 262.
Residence: 89 Belmont Ave., W. Asheville, N. C.

Gilbert, Clara L. Stenog., Agr. Ec. 117-1911. Ext. 308.
Residence: 17 Dixie Trail. Telephone 5933.

Gilchrist, C. H. Chief Pressman, Print Shop. Tompkins Hall. Ext. 281.
Residence: Route 2, Box 348.

Giles, G. W. Asso. Prof., Agr. E. 314 Ricks. Ext. 274.
Residence: 304 Horne. Telephone 2-2988.

Giles, J. F.—Ext. Cotton Market. 122 1911. Ext. 306.
Residence: 2001 Glenwood Ave. Telephone 3-2608.

Glass, G. G. Clerk, Supply Store. Y. M. C. A. Ext. 225.
Residence: 807 E. Edenton St. Telephone 9639.

Glasscock, R. S.—Asst. Prof., A. H. 217 Polk. Ext. 276.
Residence: 2202 Hillsboro.

Glenn, K. B. Asst. Prof., E. E. 104 Daniels. Ext. 235.
Residence: 309 N. Bloodworth. Telephone 2-1207.

Godwin, W. L. Supt., Laundry. Laundry. Ext. 283.
Residence: 11 Dixie Trail. Telephone 2-3120.

Goodman, J. W.—Asst. Direct., Agr. Ext. 104 Ricks. Ext. 213.
Residence: 2118 Woodland Ave. Telephone 2-2079.

Gordon, H. H. Director, F. S. A. Patterson. Telephone 2-2811.
Residence: 408 E. Franklin. Telephone 5938.

Gordon, Pauline Erwin—Specialist, Home Dem., Ext. 221-1911. Ext. 242.
Residence: 825 Hope Drive. Telephone 8430.

Grady, J. H. Asst. Prof., Arch. 309 Daniels. Ext. 250.
Residence: 1816 W. Park Dr. Telephone 8075.

Graeber, R. W. Ext. For. 307 Ricks. Ext. 270.
Residence: 303 Hillcrest Rd. Telephone 8126.

Grant, M. C.—Plumber, Service Dept. Warehouse. Ext. 272.
Residence: State College. Telephone 9927.

Greaves, R. E.—Asst. Prof. Poul. 202 Ricks. Ext. 280.
Residence: 2512 Clark Ave. Telephone 2-0019.

Greaves Walker, A. F.—Prof., Cer. E. Ceramics. Ext. 249.
Residence: 305 Forest Rd. Telephone 6264.

Green, Bebe—Stenog., Agr. Ext. 208 Ricks. Ext. 294.
Residence: 105 Harrison Ave. Telephone 7652.

*Green, J. W. Agr. Plan. Ext. 315-1911. Ext. 292.
Residence: 2513 Stafford. Telephone 2-2314.

*Green, R. W.—Asso. Prof., Econ. 113 Peele. Ext. 223.
Residence: White Oak Rd. Telephone 8460.

Greene, Minda—Stenog., Basic Div. 103 Peele. Ext. 223.
Residence: 2303 Clark Ave. Telephone 8083.

*Greene, R. E. L.—Asso. Prof., Agr. Ec. 108-1911. Ext. 309.
Residence: 24½ Shepherd. Telephone 8700.

Gregory, D. W.—Instr., Poul. 213 Ricks. Ext. 280.
Residence: 4 Maiden Lane. Telephone 4117.

*Griffin, W. B.—Chief Draftsman, Arch. 306 Daniels. Ext. 250.
Residence: 103 Park Ave. Telephone 3-2792.

*Grimshaw, A. H.—Prof., Tex. Ch. Tex. Ext. 288.
Residence: Mansion Park Hotel. Telephone 7541.

*Grinnells, C. D. In Charge, Dairy Investigation. 214 Polk. Ext. 305.
Residence: 409 Dixie Trail. Telephone 2 1305.

Gull, C. D.—Periodicals, Library. Library. Ext. 259.
Residence: 3207 Hillsboro. Telephone 5772.

*Haig, F. M.—Prof., A. H. 114 Polk. Ext. 268.
Residence: 1803 Fairview Rd. Telephone 2-0217.

*Hall, N. S.—Tch. Fel., Agron. 310 Withers. Ext. 222.
Residence: 210 Woodburn Rd. Telephone 9797.

*Halverson, J. O. In Charge Animal Nutrition, Agr. Exp. Sta. 315 Polk.
Residence: 2813 Mayview Rd. Telephone 2-1488.

Hamaker, Margaret—Secty., Arch. 315 Daniels. Ext. 250.
Residence: 2402 Clark Ave. Telephone 2-1830.

*Hamilton, C.—Prof., Head R. S. 101-2 1911. Ext. 312.
Residence: 1535 Iredell Dr. Telephone 2-3383.

*Hamilton, Mrs. W. V. Technician. Infirmary. Telephone 7615.
Residence: Infirmary. Telephone 7615.

Hand, Douglas—Secty., Agr. Ext. 203-1911. Ext. 285.
Residence: B-102 Boylan Apts. Telephone 9535.

Harden, Katherine—Clerk, Registr. Of. 205 Holladay. Ext. 219.
Residence: 1615 Hillsboro. Telephone 7502.

Hargrove, B. D.—Res. Fel., Soils. 111 Polk. Ext. 220.
Residence: 6 Enterprise. Telephone 4788.

*Harkema, R.—Asso. Prof., Zool. 202 Zool. Ext. 261.
Residence: 1732 Chester Rd. Telephone 2 1857.

Harmon, Mildred Adm. Clerk, Registr. Of. 203 Holladay. Ext. 219.
Residence: 20 Maiden Lane. Telephone 7958.

*Harrelson, J. W. Dean of Administration. 102 Holladay. 6421 Ext. 210.
Residence: 1903 Hillsboro. Telephone 6810.

*Harrill, L. R.—State 4-H Club Leader. 201 Ricks. Ext. 214.
Residence: 1607 Iredell Dr. Telephone 7628.

*Harris, J. H.—Landscape Specialist, Ext. 301 Polk. Ext. 275.
Residence: 220 E. Park Dr. Telephone 2-0856.

Harris, Katherine Stenog., Agron. 120 Ricks. Ext. 262.
Residence: 607 N. Blount. Telephone 4406.

Harris, L. H.—Steward, Boarding. Cafeteria.
Residence: Cafeteria Bldg. Telephone 2-0243.

Harris, R. J. Asst. Director, Exp. Sta.
Residence: Western Blvd. Telephone 8901.

Harrison, Thomas P. Prof., Eng., Dean Emeritus of College. 106 Peele. Ext. 223.
Residence: 1800 Park Drive. Telephone 2-0743.

Hart, T. R. Prof., Tex. Tex. Ext. 273.
Residence: 501 W. Whitaker Mill Rd. Telephone 2-1653.

Hartley, L. C. Prof., Head Eng. 102 4 Pullen. Ext. 237.
Residence: 812 East Dr. Telephone 8044.

Harvard, V. Head Nurse. Infirmary. Telephone 7615.
Residence: Infirmary. Telephone 7615.

Harvey, P. H. Asso. Prof., Agron. 315 Ricks. Ext. 207.
Residence: 2706 Everett Ave. Telephone 2-0475.

Hayes, A. C. Asst. Prof., Tex. Tex. Ext. 288.
Residence: 3008 Ruffin. Telephone 2-3851.

Haywood, Nettie D.—Secty., Agr. Exp. Sta. 109 Ricks. Ext. 211.
821 Wake Forest Rd. Telephone 4206.

Hazelburg, R. J. Res. Fel., Agr. Ec. 107 1911. Ext. 309.
Residence: Dixie Trail. Telephone 5888.

Heartt, Mrs. C. I. Secty., Ext. 201 Library. Ext. 260.
Residence: 128 S. Dawson. Telephone 4057.

Hebert, T. T. Res. Fel., Bot. 220 Winston. Ext. 267.
Residence: 106 Horne. Telephone 2-1887.

Heck, C. M. Prof., Head Phys. 112 Daniels. Ext. 229.
Residence: 200 Hawthorne Rd. Telephone 9829.

Henderson, D. E. Instr., I. E. 130-1911. Ext. 208.
Residence: Western Blvd. Telephone 8647.

Henderson, F. M. Res. Asst., R. S. 101-1911. Ext. 312.
Residence: 8½ Maiden Lane. Telephone 2 1027.

Hendricks, W. A. Res., A.M.S., Stat. 333 1911. Ext. 313.
Residence: 301 Dixie Trail. Telephone 5570.

Hendrix, A. T.—Asso. Res. Agr. E. 312 Ricks. Ext. 274.
Residence: 101 W. Whitaker Mill Rd. Telephone 8080.

Henson, Ruth S. (Mrs.) Bookkeeper, Asst. Controller. 106 Holladay. Ext. 298.
Residence: 116½ Horne. Telephone 7449.

Herbert, Dick Asst. Director, Ath. Pub., P. E. Owen. Ext. 217.
Residence: 1208 College Place. Telephone 3-2432.

Herrick, L. W. Asst., Poul. Turkey Plant.
Residence: 2804 Hillsboro. Telephone 2-2654.

Hickman, Herman Head Coach, Track; Asst. Coach Football. Field House. Ext. 6934.
Residence: 4 Fincastle Apts. Telephone 2-2618.

Hicks, W. N. Asso. Prof., Rel., Ethics. 204 Peele. Ext. 231.
Residence: 2505 Vanderbilt. Telephone 7750.

Hill (Miss) Randolph—Stenog., Agron. 120 Ricks. Ext. 262.
Residence: 2200 Hope. Telephone 2-3466.

Hilton, J. T.—Prof., Tex. Tex. Ext. 287.
Residence: 1610 Ambleside Dr. Telephone 6936.

Hines. Mrs. J. G.—Cashier, Boarding. Cafeteria. Telephone 2-0243.
Residence: Cary, Route 1.

Hines, Elizabeth—Stenog., Phys. 112 Daniels. Ext. 229.
Residence: 5 E. Edenton. Telephone 2-2475.

Hinkle, L. E.—Prof., Head M. L. 203 Poole. Ext. 231.
Residence: 1714 Park Dr. Telephone 2-0380.

Hocutt, Mrs. J. I.—Clerk, Registr. Of. 205 Holladay. Ext. 219.
Residence: 220 N. East. Telephone 2-2533.

Hoefer, E. G.—Prof., M. E. 205 Page. Ext. 302.
19 Furches. Telephone 7072.

Hoffman, M. A.—Tch. Fel., Agr.-Ch. 202 Withers. Ext. 264.
Residence: 203 Fourth Dorm. Telephone 2-2853.

Hoffman, W. H. Supt. Grounds. Warehouse. Ext. 272.
Residence: 303 Brooks Ave. Telephone 3-2649.

Hoffman, J. V. Director, Prof., For. 301 Ricks. Ext. 270.
Residence: 2800 Fairview Rd. Telephone 2-2993.

Holder, Ray—Asst. Dean of Students. 104 Holladay. Ext. 215.
Residence: Y-1 Country Club Homes. Telephone 7861.

Holler, Dan F. Asst. Ext. Agron. 204 Ricks. Ext. 294.
Residence: 3201 Ruffin. Telephone 3-1898.

Holmes, Dorcas Supervisor, Boarding. Cafeteria. Telephone 2-0243.
Residence: 214 Park Ave. Telephone 7898.

Hooke, Robert Instr., Math. 208 Tompkins. Ext. 226.
Residence: 211 Groveland Ave. Telephone 2-2751.

Hopkins, J. I.—Instr., Phys. 206 Daniels. Ext. 229.
Residence: 222 Chamberlain. Telephone 6706.

Horne, Louise Secty., Psyc. 122 Tompkins. Ext. 286.
Residence: 1701 St. Mary's. Telephone 2-2989.

Hostetler, E. H. Prof., A. H. 215 Polk. Ext. 276.
Residence: 2524 White Oak Rd. Telephone 5794.

Howard, Mrs. J. T. Stenog., Poul. Ext. 208 Ricks. Ext. 294.
Residence: 303 Hillcrest Rd. Telephone 8126.

Hudgins, Madge—Stenog., Agron. 311 Ricks. Ext. 207.
Residence: 402 Horne. Telephone 2-2129.

Huff, L. D.—Instr., Phys. 208 Daniels. Ext. 229.
Residence: 2230 Hillsboro. Telephone 2-1565.

Hunt, W. T., Jr.—Tch. Fel., E. M. 204 C. E. Ext. 303.
Residence: Apex, N. C. Telephone 2651.

Hunter. Willie N. (Miss) Home Dem., Ext. 220-1911. Ext. 242.
Residence: T-6 Raleigh Apts. Telephone 4076.

Hurst, Sara D.—Clerk, Poul. 210 Ricks. Ext. 294.
Residence: 227 Forest Rd. Telephone 2-0751.

Hutchison, J. J. Asst. Poul. Poultry Plant. Telephone 8686.
Residence: Cutler St.

Hyde, T. E. Instr., M. E. 206 Page. Ext. 247.
Residence: 205 Woodburn Rd. Telephone 2-1698.

Ireland, C. F. Grad Asst., Agron. 5 Withers. Ext. 209.
Residence: 108 Fourth Dorm.

Ison, Wade—Director Ath. Pub. Owen. Ext. 217.

Ivey, L. L.—Mgr., Supply Store. Y. M. C. A. Ext. 225.
Residence: 202 E. Park Dr. Telephone 8210.

James, H. B. Asst., Farm Mgt. Ext. 302-1911. Ext. 291.
Residence: 308 Forest Rd. Telephone 3-2365.

*Jeter, F. H.—Agr. Ed., Direc. News Bureau. 1 Ricks. Ext. 279.
Residence: 304 Forest Rd. Telephone 6518.

Johnson, Janet—Stenog., Zool. 203-B Zool. Ext. 261.
Residence: 2610 Vanderbilt. Telephone 2-1915.

Johnson, Miss Robbie—Stenog., Business Of. 109 Holladay. Ext. 278.
Residence, 101 E. Park Dr. Telephone 2-1686.

*Johnson, Mrs. R. L.—Secty., Agr. E. 311 Ricks. Ext. 207.
Fuquay Springs, N. C., Route 1.

*Jones, A. D.—Asst. Prof., Ch. 115 Withers.
Residence: 2708 Van Dyke. Telephone 8716.

Jones, D. E.—Rural Electrification Specialist, Ext. Agr. E. 312 Ricks. Ext. 274.
Residence: S-2, Raleigh Apts. Telephone 9537.

Jones, Georgia M.—Stenog., Ext. 201 Library. Ext. 260.
Residence: 615 Wills Forest. Telephone 6800.

*Jones, I. D.—Biochemist, Hort. 305 Polk. Ext. 275.
2710 Rosedale Ave. Telephone 2-3091.

Jones, L. C.—Res. Fel., Agron. Ricks. Ext. 262.
Residence: Fourth Dorm. Telephone 2-2853, Ext. 6.

Jones, Margaret—Secty., Poul. 216 Ricks. Ext. 280.
Residence: 8 St. Mary's. Telephone 2-3883.

*Jones, O. C. Foreman, Print Shop. Tompkins. Ext. 281.
Residence: Western Blvd., P. O. Box 1225. Telephone 3-2120.

*Jones, Mrs. W. B.—Clerk, Asst. Controller. 106 Holladay. Ext. 278.
Residence: Cary, N. C.

*Jordan, Alirs R.—Stenog., Farm Mgt. 302-1911. Ext. 291.
Residence: 405 Harding. Telephone 8081.

*Jordan, W. E.—Asso. Prof., Ch. 106 Withers. Ext. 265.
Residence: 2600 Rosedale Ave. Telephone 2-3574.

Joyner, Sara S.—Stenog., Agr. Ext. 213 1911. Ext. 221.
Residence: 222 Hillcrest Rd. Telephone 2-1290.

*Judd, Mrs. Lilly B.—Stenog., Agr. Exp. Sta. 109 Ricks. Ext. 211.
Residence: 309 E. Morgan. Ext. 8970.

*Keever, L. M.—Asso. Prof., E. E. 106 Daniels. Ext. 235.
Residence: 2220 Carroll Dr. Telephone 9818.

Kelman, A.—Res. Fel., Bot. 204 Winston. Ext. 267.
Residence: 2804 Hillsboro. Telephone 2-2654.

Kelner, A.—Tch. Fel., Bot. 215 Winston. Ext. 267.
Residence: 302 Fourth Dorm. Telephone 2-2853, Ext. 6.

*Kenyon, Mrs. B. W., Jr.—Secty., Zool. 104 Zool. Ext. 239.
Residence: J-2 Raleigh Apts. Telephone 2-1098.

*Kerr, E. G.—Supt., Dairy Farm. Ext. 268.
Residence: Dairy Farm Cottage.

Kerr, T.—Cytologist U. S. 104 Polk. Ext. 300.
Residence: 2701 Clark Ave. Telephone 7756.

Kime, P. H.—Asso. Agron. 113 Ricks. Ext. 262.
Residence: 2720 Vanderbilt. Telephone 2-2126.

*Kimrey, A. C.—Ext. Dairyman. 116 Polk. Ext. 277.
Residence: 220 E. Park Dr. Telephone 2-0856.

*Kincheloe, H. G.—Instr., Eng. 4 Pullen. Ext. 237.
Residence: 2801 Anderson Dr. Telephone 3-2420.

*King, E. S.—Gen. Secty., Y. M. C. A. Y. M. C. A. Telephone 0-7184.
Residence: 121 Chamberlain. Telephone 4511.

King, Nora L.—Secty., Dean of Administration. 102 Holladay. Ext. 210.
Residence: 205 Woodburn Rd. Telephone 2-1698.

*Knight, E. S.—Radio Ed., Agr. Ext. Pubs. 11 Ricks. Ext. 279.
Residence: Joslyn Apts. Telephone 3-2654.

*Knight, L. M.—Sgt. U. S. Army, Mil. Armory Gym. Ext. 232.
Residence: 420 Kirby. Telephone 3-1672.

*Knudsen, A. R.—Res. Fel., Plant Ch. 9 Withers. Ext. 209.
Residence: 402 W. Lenoir. Telephone 9723.

Kronstadt, R.—Tch. Fel., Ch. 207 Withers. Ext. 264.
Residence: 101 Fourth Dorm. Telephone 2-2853, Ext. 6.

Kruger, A. N.—Instr., Eng. 1 Pullen. Ext. 237.
Residence: 205 Woodburn Rd. Telephone 2-1698.

*Kutschinski, C. D. Director, Music. 10 Holladay. Ext. 251.
Residence: 1500 Hillsboro. Telephone 5427.

Ladu, A. I.—Prof., Eng. 105 Pullen. Ext. 237.
Residence: 705 Hillsboro. Telephone 2 0709.

*Lake, R. E.—Instr., M. E. 104 Page. Ext. 246.
Residence: B-5 Raleigh Apts. Telephone 5170.

*Lambe, C. M.—Asst. Prof., C. E. 219 C. E. Ext. 303.
Residence: 413 Calvin Rd. Telephone 6565.

*Lancaster, Elizabeth D. Bookkeeper, Voc. Ed. 108 Tompkins. Ext. 311.
Residence: 407 N. Person. Telephone 5896.

*Lancaster, F. W.—Asso. Prof., Phys. 206 Daniels. Ext. 229.
Residence: 2403 Everett Ave. Telephone 6316.

Lancaster, J. L.—Lt. Col., U. S. Army, Asst. PMS&T. 2 Holladay. Ext. 233.
Residence: 117 Woodburn Rd. Telephone 8145.

*Lange, Gunnar—Asst. Prof., Agr. Ec. 113-1911. Ext. 308.
Residence: 2510½ Vanderbilt. Telephone 3-1192.

*Larkin, R. C., Jr. Econ., Agr. Ec. 107-1911. Ext. 309.
Residence: 2303½ Clark Ave. Telephone 5476.

*Lauer, B. E.—Prof., Ch. E. 106 Winston. Ext. 301.
Residence: 2510 Clark Ave. Telephone 7479.

*Leagans, J. P. Specialist, Agr. Plan. Ext. 310-1911. Ext. 292.
Residence: 24 Shepherd. Telephone 7866.

*Leager, M. C. Prof., Account. and Stat., Ec. 116 Peele. Ext. 224.
Residence: 2718 Bedford Ave. Telephone 6204.

*Lear, John E.—Prof., E. E. A-7 Daniels. Ext. 235.
Residence: 1812 Park Dr. Telephone 7701.

*Lee, W. D. Ext. Soil Specialist, Agron. 206 Ricks. Ext. 294.
Residence: 318 Furches. Telephone 2 3930.

*Lefort, C. R.—1st Lt., U. S. Army, Asst. PMS&T. 11 Holladay. Ext. 314.
Residence: 821 Hillsboro. Telephone 7105.

*Lehman, S. G.—Prof., Bot. 205 Withers. Ext. 267.
Residence: 123 Brooks Ave. Telephone 8764.

Leighton, H. P. Staff Sgt., U. S. Army, Mil. 1 Holladay. Ext. 233.
Residence: 2008 Hillsboro. Telephone 6325.

*Leipold, J. A.—Tech. Sgt., Deml., U. S. Army, Mil. 1 Holladay. Ext. 232.
Residence: 1919 Reid. Telephone 6095.

Leonard, P. B.—Instr., M. E. 207 Page. Ext. 247.
Residence: 3201 Hillsboro. Telephone 9692.

Levine, Jack Asso. Prof., Math. 209 Tompkins. Ext. 226.
Residence: 2702 Rosedale. Telephone 8775.

Lewis, J. G. Asso. Prof., Tex. 2nd Floor, Tex. Ext. 273.
Residence: 518 Dixie Trail. Telephone 7783.

Lightfoot, R. M. Circulation Librarian. Library. Ext. 259.
Residence: 2 Maiden Lane.

Lineberry, R. A. Asst. Chemist, Agron. 511 1911. Ext. 262.
Residence: 3006 Ruffin. Telephone 3-1125.

Little, F. L., Jr. Asst. Ext. L. A. 303 Polk. Ext. 275.
Residence: 117½A, Woodburn Rd. Telephone 5480.

Lloyd, Mildred Stenog., Tex. 1st Floor, Tex. Ext. 273.
Residence: 307 Georgetown Rd. Telephone 6746.

Lockmiller, D. A. Prof., Head Hist., Pol. Sc. 102 Peele. Ext. 223.
Residence: 612 Rosemont Ave. Telephone 6468.

Lodwick, J. W. Tch. Fel., Agron. 310 Withers. Ext. 222.
Residence: 114 Horne. Telephone 4987.

Loeppert, R. H. Instr., Ch. 318 Withers. Ext. 297.
Residence: 301 Forest Rd. Telephone 2 1414.

Lovvorn, R. L. Asso. Prof., Agron. 112 Ricks. Ext. 262.
Residence: 2707 Bedford Ave. Telephone 6579.

Ludington, J. R. Asso. Prof., Ind. Arts Ed. 102 Tompkins. Ext. 258.
Residence: H-3-B Cameron Ct. Apts. Telephone 5288.

Lutz, J. F. Prof., Soils. 115 Ricks. Ext. 262.
Residence: Dixie Trail. Telephone 2-2460.

Lyell, F. H. Asso. Prof., Eng. 5 Pullen. Ext. 237.
Residence: 224 Hawthorne Rd. Telephone 5428.

Lyle, J. A. Res. Fel., Bot. 212 Withers. Ext. 267.
Residence: C-1 Wilmont Apts. Telephone 8365.

McClain, E. F. Tch. Fel., Zool. 105 Zool. Ext. 239.
Residence: Eighth Dorm. Telephone 2-2853, Ext. 12.

McCrary, O. F. Dist. Agent, Agr. Ext. 101 Ricks. Ext. 212.
Residence: 1029 W. South. Telephone 9922.

McCutcheon, R. F. Asso. Prof., Zool. 209 Zool. Ext. 239.
Residence: 2721 Van Dyke. Telephone 6453.

McDonald, Mrs. Flemmon P. Clerk, Dean of Students. 103 Holladay. Ext. 215.
Residence: Route 2, Box 83, Raleigh, N. C.

McDonald, Katherine D. Stenog., Ext. 201 Library. Ext. 260.
Residence: Wake Forest, N. C. Telephone 2676.

McGehee, W. Asso. Prof., Psyc. 122 Tompkins. Ext. 286.
Residence: 2809 Anderson Dr. Telephone 8017.

MacGregor, Frances Asst. State 4-H Club Leader. 201 Ricks. Ext. 214.
Residence: D-3 A Cameron Ct. Apts. Telephone 2-2136.

MacIntyre, Mrs. F. McP. Secty., Ch. 108 Withers. Ext. 265.
Residence: 4 Maiden Lane. Telephone 4117.

McIver, Julia Specialist, Home Dem., Agr. Ext. 217-1911. Ext. 242.
Residence: 2202 Ridgecrest Rd. Telephone 2 1904.

McKimmon, Jane S.—Asst. Director, Home Dem., Agr. Ext. 105 Ricks. Ext. 255.
Residence: 123 New Bern Ave. Telephone 8619.

*McKimmon, Mrs. K. C. Clerk, Agron. 120 Ricks. Ext. 262.
Residence: 122 Park Ave. Telephone 6753.

*McLean, Mrs. A. B.—Clerk, Agr. Ext. 111 Ricks. Ext. 271.
Residence: C-6 Raleigh Apts. Telephone 3-1037.

McLean, Grayce—Clerk, Asst. Controller. 106 Holladay. Ext. 316.
Residence: 1508 Hillsboro. Telephone 6153.

*McMillan, R. L.—Instr., Business Law. 104 Peele. Ext. 223.
Residence: 1810 W. Park Drive. Telephone 7048.

McNair, Mary—Stenog., Agr. 309-1911. Ext. 292.
Residence: 2707 Kilgore Ave. Telephone 5249.

McPherson, W. W.—Jr. Econ., Agr. Ec. 108-1911. Ext. 309.
Residence: 202 Groveland. Telephone 3-2459.

*Maddison, C. W.—Foreman, Foundry. Shops. Ext. 245.
Residence: 908 W. Johnson. Telephone 2-2143.

Maddrey, Linda—Secty., Math. 201 Tompkins. Ext. 227.
Residence: Avent Ferry Rd. Telephone 5797.

*Mann, C. L. Prof., Head C. E. 211 C. E. Ext. 303.
Residence: 1702 Hillsboro. Telephone 6825.

*Mann, J. E.—In Charge, Ext. Studies, Agr. Ext. 108 Ricks. Ext. 255.
Residence: 2505 Country Club Rd. Telephone 2 3415.

Mann, W. R. Instr., Ae. E. and Airport Mgr. Airport, Chapel Hill. Telephone 8216.
Residence: 117 Rosemary St., Chapel Hill, N. C.

Mappus, W. A. Tch. Fel., Ch. 109 Withers. Ext. 265.
Residence: 301 Fourth Dorm. Telephone 2-2853, Ext. 6.

*Marshall, R. P.—Asso. Prof., Eng. 103 Pullen. Ext. 237.
Residence: 1512 Park Dr. Telephone 5297.

Mason, D. D. Res. Asst., Stat. 337-1911. Ext. 313.
Residence: 202 Groveland. Telephone 3-2459.

*Mason, Mrs. Edna B.—Secty., C. E. 210 C. E. Ext. 303.
Residence: 1725 Chester Rd. Telephone 9501.

Mason, Eleanor H.—Chief Clerk, Home Dem., Agr. Ext. 207-1911. Ext. 244.
Residence: 302 N. Blount. Telephone 2-2938.

*Maupin, C. J.—Ext. Poultryman. 210 Ricks. Ext. 294.
Residence: 2806 Hillsboro. Telephone 8950.

*Maupin, Mrs. T. K. Stenog., Cer. E. Ceramics. Ext. 249.
Residence: 2725 Bedford Ave. Telephone 2-3003.

*Mayer, W. L.—Director, Registration. 207 Holladay. Ext. 219.
Residence: 20 Bagwell Ave. Telephone 2-0027.

Mayes, Allene—Asso. Nurse. Infirmary. Telephone 9-7615.
Residence: Infirmary. Telephone 7615.

*Mayo, S. C.—Asst., R. S. 103-1911. Ext. 312.
Residence: D-3 Country Club Homes.

*Mayton, R. W. Foreman, Service Dept. Warehouse. Ext. 272.
Residence: Cary, N. C.

*Meacham, E. H.—Soil Conservationist Agr. Ext. 206 Ricks. Ext. 294.
Residence: 825 Holt Drive. Telephone 8430.

*Meacham, F. B.—Asst. Prof., Zool. 106 Zool. Ext. 239.
Residence: 2716 Everett Ave. Telephone 2-0606.

Meacham, Nelle M.—Secty., Home Dem., Agr. Ext. 209-1911. Ext. 243.
Residence: 1508 Hillsboro. Telephone 6153.

*Meekins, E. N.—Dist. Supervisor, Voc. Agr. Ed. 106 Tompkins. Ext. 282.
Residence: Cary, N. C. Telephone 2591.

*Mehlich, Adolf—Asso., Soil Ch., Agron. 111 Polk. Ext. 220.
Residence: 2717 Barmettler. Telephone 2-1863.

Mercer, Susannah—Secty., Engr. Exp. Sta. 207 C. E. Ext. 307.
Residence: 1700 Park Dr. Telephone 2-0060.

Merker, D. R.—Res. Fel., Agron. 3 Withers. Ext. 209.
Residence: Fourth Dorm. Telephone 2-2853, Ext. 6.

*Merritt, Mrs. Emily W.—Bookkeeper, Asst. Controller. 105 Holladay. Ext. 316.
Residence: C-2 Wilmont Apt. Telephone 2-1002.

Messenger, Janet M.—Clerk, Registr. 203 Holladay. Ext. 219.
Residence: 2402 Hillsboro. Telephone 2-1324.

*Metcalf, Z. P.—Prof., Zool.; Director, Instruction, Sch. of Agr. and For.; Director, Grad. Studies. 101 Zool. Ext. 239.
Residence: 315 Forest Rd. Telephone 2-3788.

*Middleton, G. K. Head, Crops, Agron. 119 Ricks. Ext. 262.
Residence: 2830 Barmettler. Telephone 2-2312.

*Milam, F. M.—Res. Asst., Agron. 111 Polk. Ext. 220.
Residence: 2612 Clark Ave. Telephone 2-1586.

*Millar, M. W.—Voc. Coordinator, St. Dept. of Ed. 17 Holladay. Ext. 293.
Residence: 2506 Clark Ave. Telephone 4395.

*Miller, J. F.—Prof., Head P. E. and Ath. Gym. Ext. 218.
Residence: 191 Chamberlain. Telephone 5823.

*Miller, W. D.—Asso. Prof., For. 303 Ricks. Ext. 270.
Residence: 1907 Victoria Rd. Telephone 2-1066.

Mitchell, Prentiss—Cashier, Boarding. Cafeteria. Telephone 2-0243.
Residence: 202 Cox Ave. Telephone 7910.

*Mitchell, T. B.—Prof., Zool. 103 Zool. Ext. 239.
Residence: 1007 W. Peace St. Telephone 6967.

*Moen, R. O.—Prof., Business Adm. 113 Peele. Ext. 223.
Residence: 3202 Clark Ave. Telephone 5051.

*Moffie, D. J.—Instr., Psyc. 124 Tompkins. Ext. 286.
Residence: U-3-B Cameron Ct. Apts. Telephone 3-2386.

Monk, Martha M. Secty., News Bureau. 13 Ricks. Ext. 253.
Residence: 310 E. Edenton. Telephone 2-1245.

Monroe, R. J.—Instr., Stat. 334-1911. Ext. 313.
Residence: 202 Groveland. Telephone 3-2459.

*Montague, Virginia M.—Jr. Clerk, Stat. 340-1911. Ext. 313.
903 W. Lenoir St. Telephone 2-3310.

*Moore, J. H.—Cotton Technologist, Agron. 317 Ricks. Ext. 207.
Residence: 2713 Bedford Ave. Telephone 2-3638.

*Moore, J. L.—Asst., Dairy Res. 213 Polk. Ext. 305.
Residence: 3208 Clark Ave. Telephone 2-0821.

*Moore, Mrs. J. L.—Secty., Dairy Ext. 118 Polk. Ext. 277.
Residence: 3208 Clark Ave. Telephone 2-0821.

*Moose, P. E.—Maj., U. S. Army, Asst. PMS&T. 12 Holladay. Ext. 314.
Residence: 3113 Stanhope Ave. Telephone 9960.

Morris, Mrs. Cornelia C.—Ext. Economist, Home Dem., Agr. Ext. 215-1911. Ext. 242.
Residence: A-101 Boylan Apts. Telephone 2-1591.

Morris, W. F. Director, Service Dept. Warehouse. Ext. 272.
Residence: 2509 Vanderbilt. Telephone 5319.

Morrow, E. B.—Asso. Hort. 309 Polk.
Residence: 2712 Vanderbilt. Telephone 2-1952.

Morton, Laura B.—Stenog., 4-H. 201 Ricks. Ext. 214.
Residence: 1000 Glenwood Ave. Telephone 2-3686.

Moss, Dan Tch. Fel., Tex. Tex. Ext. 288.
Residence: 2804 Hillsboro. Telephone 2-2654.

Mullen, Cornelia—Cashier, Boarding. Cafeteria. Telephone 2-0243.
Residence: 2511 Stafford. Telephone 8917.

Mumford, C. G.—Asso. Prof., Math. 224 Tompkins. Ext. 228.
Residence: 712 Brooks Ave. Telephone 5315.

Mumford, Miss Howard—Clerk, P. E. Gym. Telephone 2-2407.
Residence: 1313 Hillsboro. Telephone 4142.

Murray, W. M. Auditor, Asst. Controller. 106 Holladay. Ext. 298.
Residence: H-2-A Cameron Ct. Apts. Telephone 2-0011.

Mynes, James F.—Tch. Fel., E. E. 105 Daniels. Ext. 235.
Residence: 401 S. McDowell. Telephone 4386.

Nahikian, H. M.—Asst. Prof., Math. 222 Tompkins. Ext. 228.
Residence: 3207 Hillsboro. Telephone 5772.

Neale, W. McC., Instr., M. E. 207 Page. Ext. 247.
Residence: 2224 Hillsboro. Telephone 5983.

Nelson, Thomas, Dean Tex. Sch. 1st floor, Tex. Ext. 273.
Residence: 16 Enterprise. Telephone 2 2247.

Nesbit, W. B.—Mgr., Turkey Plant. Turkey Plant. Ext. 921.
Residence: 921 W. South. Telephone 2 2247.

Newman, Mrs. C. L.—Stenog., Hort. 304 Polk. Ext. 275.
Route 6, Raleigh, N. C. Telephone 2-0912.

Newton, Foy, Stenog., Agr. Ext. 101 Ricks. Ext. 212.
Residence: 319 New Bern Ave. Telephone 2-2096.

Newton, Williams, Head Coach, Football and Baseball. Fieldhouse. Telephone 6934.
Residence: Macedonia Rd.

Nichols, J. H. Instr., E. E. 9 Daniels. Ext. 235.
Residence: 11 Dixie Trail. Telephone 9776.

Nielson, L. W.—Asst. Plant Pathol. 217 Winston. Ext. 267.
Residence: 3517 Neil St. Telephone 2 3387.

Niswonger, H. R.—Ext. Hort. 301 Polk. Ext. 275.
Residence: A-2-A Cameron Ct. Apts. Telephone 2-3297.

Olive, Floyd—Res. Asst., Agron. 133 Ricks. Ext. 262.
Residence: 1712 Park Dr. Telephone 2-0472.

Olson, H. C.—Res. Fel., Zool. 105 Zool. Ext. 239.
Residence: 123 Brooks Ave. Telephone 8761.

Page, J. M.—Instr., E. D. T. 309 Daniels. Ext. 250.
Residence: 410 Kinsey St. Telephone 6290.

Paget, E. H.—Asso. Prof., Eng. 109 Pullen. Ext. 237.
Residence: 2733 Everett Ave. Telephone 2-3495.

*Park, C. B.—Instr. Emeritus, M. E.
Residence: 125 Hawthorne Rd. Telephone 6957.

*Park, H. V.—Asst. Prof., Math. 222 Tompkins. Ext. 228.
Residence: 404 Chamberlain. Telephone 2-3589.

*Parker, Mrs. A. M.—Auditor, Agr. Ext. 111 Ricks. Ext. 271.
Residence: 604 Rosemont. Telephone 9572.

*Parker, J. M., III—Asst. Prof. Geol. Engr. 2 Primrose. Ext. 304.
Residence: 22 Shepherd. Telephone 6754.

Parker, W. F., Jr.—Tch. Fel., Poul. 202 Ricks. Ext. 280.
Residence: 4 Maiden Lane. Telephone 4117.

*Parker, W. L.—Instr., Phys. 110 Daniels. Ext. 229.
Residence: 1507 Ambleside Dr. Telephone 2-0277.

*Parkinson, L. R.—Prof., Head Ae. E. Aero. Lab. Ext. 248.
Residence: T-4 Raleigh Apts. Telephone 2-3422.

*Parrish, C. F.—Ext. Poultryman. 208 Ricks. Ext. 294.
Residence: Western Blvd. Telephone 2-2888.

Paul, Dan M.—Director of Agr. Short Courses; Alumni Secty. 201 Holladay. Ext. 252.
Residence: S-2, Raleigh Apts. Telephone 9537.

*Paulson, J. D.—Asso. Prof., Arch. E. 315 Daniels. Ext. 250.
Residence: 2705 Everett Ave. Telephone 8823.

*Pearce, F. W.—Asso. Prof., C. E. 208 C. E. Ext. 303.
Residence: Powell Dr. Telephone 8905.

*Pearsall, R. J.—Asst. Prof., E. E. 106 Daniels. Ext. 235.
Residence: 121 Chamberlain. Telephone 3-1577.

Pearson, R. W.—Asst., Poul. Plant. Poul. Plant. Telephone 8686.
Residence: 222 Park Ave. Telephone 5016.

*Peeler, R. J. Asst. Voc. Agriculturist. 106 Tompkins. Ext. 282.
Residence: 2812 Kilgore. Telephone 2-3649.

Peeples, R. C.—Res. Fel., Zool. 105 Zool. Ext. 239.
Residence: 123 Brooks Ave. Telephone 8764.

*Perry, E. L. Machinist. Machine Shop.
Residence: 200 Furches St. Telephone 6034.

*Perry, Gilbert R.—Linotype Operator, Print Shop. Tompkins. Ext. 281.
Residence: 5 Rosemary St. Telephone 9725.

Perry, Vivian M. Clerk, Farm Mgt. 301-1911. Ext. 291.
Residence: 217 N. Wilmington. Telephone 6105.

Phelps, Mrs. Elaine T. Clerk, Registr. 206 Holladay. Ext. 219.
Residence: 15 Enterprise. Telephone 8433.

Phelps, W. R. Clerk, Service Dept. Warehouse. Ext. 272.
Residence: 217½ N. Bloodworth. Telephone 6688.

*Phillips, L. B.—Clerk, Agr. Ext. Pubs. 21 Ricks. Ext. 254.
Residence: 2809 O'Berry St. Telephone 8437.

*Pickering, Mrs. C. B.—Secty., Tch. Ed. 102 Tompkins. Ext. 258.
Residence: 208½ Forest Rd. Telephone 2-3365.

Pierce, J. C. Asst., A. H. Res. 216 Polk. Ext. 276.
Residence: 107 Fourth Dorm. Telephone 2-2853.

*Piland, J. R.—Asst. Soil Chemist. 5 Withers. Ext. 209.
Residence: 2406 Stafford. Telephone 9511.

*Pillsbury, J. P.—Prof., L. A. 204 Polk. Ext. 296.
Residence: 2715 Hillsboro. Telephone 6694.

*Poole, Mrs. M. F. Asst. Cataloguer, Library. Library. Ext. 259.
Residence: 14 Hillsboro Apts.

*Porter, J. A., Jr.—Asst. Prof., Tex. 2nd floor, Tex. Ext. 273.
Residence: 2402 Clark Ave. Telephone 5458.

Powell, Dr. G. B.—Trainer, P. E. & Ath. Fieldhouse. Telephone 6934.
Residence: Fieldhouse.

*Quay, T. L.—Tch. Fel., Zool. 105 Zool. Ext. 239.
Residence: 2805 Bedford Ave. Telephone 2-2706.

*Quay, Mrs. T. L.—Secty.. Agr. and For. 101 Zool. Ext. 239.
Residence: 2805 Bedford Ave. Telephone 2-2706.

Rackliffe, Carolyn Secty., I. E. 129-1911. Ext. 208.
203 Woodburn Rd. Telephone 5304.

*Randall, G. O. Asso. Prof., Hort. 305 Polk. Ext. 275.
Residence: Highway 15. Telephone County 6211.

*Randolph, E. E. Prof., Head Ch. E. 111 Winston. Ext. 301.
Residence: 212 Groveland. Telephone 8992.

*Rankin, W. H.—Asso. Agron. 114 Ricks. Ext. 262.
Residence: 2408 Stafford. Telephone 8057.

*Rautenstrauch, R. F. Asst. Prof., Ae. E. Aero. Lab. Ext. 248.
Residence: 803 Chamberlain.

*Ray, Sola L.—Stenog., Basic Div. 105 Peele. Ext. 223.
Residence: 529 N. Person. Telephone 2-3867.

*Reddish, Mrs. Paul—Stenog., Voc. Ed. 106 Tompkins. Ext. 282.
Residence: Cary. N. C.

*Reid, W. A.—Asst. Prof., Ch. 311 Withers. Ext. 265.
Residence: 2716 Barmettler. Telephone 8945.

Reisenauer, H. M.—Fel., Agron. 8 Withers. Ext. 209.
Residence: Fourth Dorm. Telephone 2-2853, Ext. 6.

*Reker, Eleanore N.—Secty., Dean of Engr. 122 C. E. Ext. 216.
Residence: 2503 Country Club Rd. Telephone 4124.

*Rice, R. B. Prof., Exp. Engr., M. E. 107 Page. Ext. 246.
Residence: 2502 White Oak Rd. Telephone 2-1195.

Richardson, Elizabeth Stenog., Land Use Plan. 309 1911. Ext. 292.
2015 Glenwood Ave. Telephone 6875.

*Riddick, Dr. W. C.—Prof., Hydraulics. 220 Tompkins. Ext. 228.
Residence: 225 Woodburn Rd. Telephone 2-0429.

*Riddle, A. A.—Supt., Power Plant. Power Plant. Ext. 234.
Residence: 2805 Bedford Ave. Telephone 2-2706.

Riddle, Linda I.—Secty., Voc. Ed. 108 Tompkins. Ext. 311.
Residence: 2805 Bedford Ave. Telephone 2 2706.

*Rigney, J. A. Asso. Prof., Agron. 338-1911. Ext. 313.
Residence: 712 Brooks Ave. Telephone 2-0340.

Robinson, Emma Mae Asst., Circ., Library. Library. Ext. 259.
Residence: Cary, N. C.

Robinson, H. F. Asst., Agron. 18 Withers. Ext. 263.
Residence: 114 Horne. Telephone 4987.

*Rondeau, Henri—Pantry, Boarding. Cafeteria. Telephone 2-0243.
Residence: 115 Oberlin Rd. Telephone 5435.

Rothberg, Maurice Tch. Fel., R. S. 101-1911. Ext. 312.
Residence: 203 Fourth Dorm. Telephone 2 2853, Ext. 6.

Rowe, Anna C.—W. Dist. Agent, Home Dem., Agr. Ext. 208-1911. Ext. 285.
Residence: T-6 Raleigh Apts. Telephone 4076.

Rowe, Beatrice—Secty., Eng. 104 Pullen. Ext. 237.
Residence: 1709 Hillsboro. Telephone 9802.

*Rowell, Helen F.—Stenog., Agr. Ext. 214-1911. Ext. 221.
Residence: Highland Ridge Rd. Telephone 8432.

*Rowell, J. O.—Ext. Entomol. 204 Zool. Ext. 261.
Residence: Highland Ridge Rd. Telephone 8432.

*Rowland, M. R.—Asst. Prof., M. E. M. E. Shops. Ext. 245.
Residence: 312 Pogue. Telephone 2-3011.

*Rudy, Mrs. Margaret—Clerk, Agr. Ec. 110-1911. Ext. 309.
Residence: 3 S. East. Telephone 4890.

*Ruffner, R. H.—Prof., A. H. 115 Polk. Ext. 268.
Residence: 1910 Park Dr. Telephone 2-0746.

*Ruggles, E. W. Director, College Ext. 204 Library. Ext. 260.
Residence: 2411 Everett Ave. Telephone 2-1812.

Sailer, Stephen S. Mgr., Print Shop. 13 Tompkins. Ext. 281.
Residence: 304 Forest Rd. Telephone 6518.

*Satterfield, G. H.—Prof., Ch. (Biochemistry). 201 Withers. Ext. 264.
Residence: 407 W. Park Dr. Telephone 2-2963.

*Satterfield, H. E.—Prof., M. E. 103 Page. Ext. 246.
Residence: 201 Groveland. Telephone 7264.

*Schaub, I. O.—Dean, Sch. of Agr. & For., Director, Agr. Ext. 104 Ricks. Ext. 213.
Residence: Western Blvd. Telephone 8610.

Schaub, Maud K.—Specialist, Agr. Plan., Ext. 313-1911. Ext. 292.
Residence: Route 4, Raleigh, N. C. Telephone 8610.

Schell, S. C.—Tch. Fel., Zool. 105 Zool. Ext. 239.
Residence: 2716 Everett Ave. Telephone 2-0606.

*Schmidt, Robert—Prof., Asso. Hort., Agr. Exp. Sta. 307 Polk. Ext. 275.
Residence: 516 Daughtridge. Telephone 4235.

Scholtz, Ruby—Asst. Ext. Econ., Agr. Ext. Home Dem. 216-1911. Ext. 242.
Residence: 1619 Oberlin Rd. Telephone 9956.

*Schoof, H. F.—Instr., Zool. 103 Zool. Ext. 239.
Residence: D-5 Raleigh Apts. Telephone 2-3544.

*Schoof, Mrs. H. F.—Stenog., Bot. 220 Winston. Ext. 267.
Residence: D-5 Raleigh Apts. Telephone 2-3544.

Schultz, E. F., Jr.—Res. Fel., Agron. 119 Ricks. Ext. 262.
Residence: 6 Enterprise. Telephone 4788.

*Scott, Mrs. J. K.—Stenog., Agr. Ext. 104 Ricks. Ext. 213.
1505 Caswell. Telephone 7931.

*Seagraves, W. P.—Instr., Math. 224 Tompkins. Ext. 228.
Residence: 402 Horne. Telephone 8357.

*Seagraves, Mrs. W. P.—Stenog., Hort. 312 Polk. Ext. 206.
Residence: 402 Horne. Telephone 8357.

Seatz, L. F.—Tch. Fel., Agron. 310 Withers. Ext. 222.
Residence: 114 Horne. Telephone 4987.

Seawell, Elizabeth—Secty., Home Dem. 223-1911. Ext. 242.
Residence: Wake Forest, N. C.

*Seegers, L. W.—Asst. Prof., Hist. 107 Peele. Ext. 223.
Residence: 113½ Chamberlain. Telephone 6238.

*Seekins, C. W. Instr., Math. 221 Tompkins. Ext. 228.
Residence: 3 Ashe Ave.

*Seely, J. Frank—Instr., Ch. E. 107 Winston. Ext. 301.
Residence: M-2-A Cameron Ct. Apts. Telephone 9533.

*Seely, Lucille (Mrs.)—Secty., Ch. E. 111 Winston. Ext. 301.
Residence: M-2-A Cameron Ct. Apts. Telephone 9533.

Shackford, J. A.—Instr., Eng. 4 Pullen. Ext. 237.
Residence: 109 Oberlin Rd. Telephone 7997.

*Shanklin, J. A.—Agent, U.S.D.A., Agron. 204 Ricks. Ext. 294.
Residence: 406 Brooks Ave. Telephone 3-1058.

*Shaw, H. B.—Prof., Ind. E. 128-1911. Ext. 208.
Residence: 216 Forest Rd. Telephone 2 1964.

*Shaw, K. J. Agent, U.S.D.A., Bot. 202 Winston. Ext. 267.
Residence: 2409 Stafford. Telephone 9659.

*Shaw, L.—Prof., Bot. 219 Winston. Ext. 267.
Residence: 2720 Kilgore Ave. Telephone 5937.

*Shelley, A. B. R. Instr., Eng. 13 Peele. Ext. 237.
Residence: 810 Chamberlain. Telephone 6235.

*Shepherd, M. L.—Capt. U. S. Army, Asst. PMS&T. 11 Holladay. Ext. 314.
Residence: 111½ Chamberlain. Telephone 2-2945.

*Sherwood, F. W.—Asso., Agr. Exp. Sta. 317 Polk. Ext. 241.
Residence: 318 N. Boundary. Telephone 2-0128.

*Shinn, W. E.—Prof., Tex. Tex. Ext. 278.
Residence: 2709 Bedford Ave. Telephone 2-0387.

*Shirley, Mrs. L. M. Secty., Voc. Agr. Ed. 106 Tompkins. Ext. 282.
Residence: 2515 Clark Ave. Telephone 2-3906.

*Shoffner, R. W.—Ext. Ec. in Farm Mgt. 307-1911. Ext. 291.
Residence: 2810 Exeter Circle. Telephone 7977.

*Showalter, M. F. Asso. Prof., Ch. 220 Withers. Ext. 264.
Residence: 2820 Barmettler. Telephone 8858.

*Shulenberger, C. B. Asso. Prof., Accounting. 115 Peele. Ext. 224.
Residence: 2501 Stafford. Telephone 7165.

*Shumaker, R. Prof., Arch.; College Architect. 315 Daniels. Ext. 250.
Residence: 2744 Rosedale. Telephone 2-1706.

*Shunk, I. V.—Asso. Prof., Bot. 211 Winston. Ext. 267.
Residence: 1809 Park Dr. Telephone 7810.

Silver, Virginia N. Sr. Stat. Clerk, Stat. 340-1911. Ext. 313.
Residence: 14 Enterprise.

*Slocum, G. K. Asso. Prof., For. 306 Ricks. Ext. 270.
Residence: 226 Woodburn Rd. Telephone 5508.

*Smith, B. W.—Asst. Prof., Agron. 112 Ricks. Ext. 262.
Residence: 2610 Rosedale. Telephone 9962.

*Smith, C. F.—Asst. Res. Entomol. 6 Zool. Ext. 239.
Residence: 2714 N. Dr. Telephone 2 3396.

*Smith, Mrs. Estelle T. S. E. Dist. Agent, Home Dem., Agr. Ext. 202-1911. Ext. 243.
Residence: 128 E. Edenton. Telephone 2 0853.

*Smith, F. H.—Asst. Agr. Exp. Sta. 316 Polk. Ext. 241.
Residence: 2506 Stafford. Telephone 6798.

*Smith, G. W.—Prof., Head, E. M. 101 C. E. Ext. 317.
Residence: 222 Hawthorne Rd. Telephone 5120.

Smith, Hal, Clerk, Central Stores. Warehouse. Ext. 272.
Residence: Clayton, N. C. Telephone 3396.

Smith, Hattie C.—Secty., Ext. Agr. Engr. 318 Ricks. Ext. 274.
Residence: 2402 Everett Ave. Telephone 6814.

Smith, J. N., Jr. Instr., Cer. E. Ceramics. Ext. 249.
Residence: 102 Logan Ct. Telephone 4959.

*Smith, J. W.—Asso. Prof., Teach. Ed. 104 Tompkins. Ext. 257.
Residence: 2626 Dover Rd. Telephone 2-3654.

*Smith, Mrs. Mary T.—Res. Asst., Agron. 214 Winston. Ext. 267.
Residence: 2610 Rosedale. Telephone 9962.

Smith, Pauline—N. E. Dist. Agent, Home Dem., Agr. Ext. 204-1911. Ext. 285.
Residence: 105 Eden Hall Apts. Telephone 5200.

Soil Conservation Service—Polk. Ext. 4832.
*E. B. Garrett, State Coordinator, In Charge.

Spedirs, R. K., Jr.—Tch. Fel., Bot. 215 Winston. Ext. 267.
Residence: 123 Brooks Ave. Telephone 8764.

*Stainback, R. F.—Asst. Prof., Phys. 108 Daniels. Ext. 229.
Residence: 317 Univ. Dr., Chapel Hill, N. C. Tel. Chapel Hill 9791.

Steele, Nancy H.—Secty., Alumni Of. 202 Holladay. Ext. 252.
Residence: 1700 Park Dr. Telephone 2-1923.

Steelman, C. H., Jr.—Res. Fel., Hort. 309 Polk. Ext. 275.
Residence: 108 Fourth. Telephone 2-2853, Ext. 6.

*Stevens, R. O.—Prof., Zool. 203-A Zool. Ext. 261.
Residence: Highway 15-A.

*Stinson, E. H.—Instr., M. E. 206 Page. Ext. 247.
Residence: 104 Harrison Ave.

*Stone, R. L.—Acting Asso. Prof., Cer. E. Ceramics. Ext. 249.
Residence: 102 Logan Ct. Telephone 4959.

Stott, C. C.—1st Lt., U. S. Army, Asst. PMS&T. 11 Holladay. Ext. 314.
Residence: 2208 Hope St. Telephone 7056.

Stott, Estelle H.—Chief Clerk, Agr. Ext. Pubs. 3 Ricks. Ext. 279.
Residence: 2208 Hope St. Telephone 7056.

Stott, Juanita Asst. Registrar. 204 Holladay. Ext. 219.
Residence: 2208 Hope St. Telephone 7056.

*Strobel, C. F.—Instr., Math. 208 Tompkins. Ext. 226.
Residence: 555 Lake Boone Trail. Telephone 7839.

*Stuart, A. D.—Asso. Prof., Agron. 18 Withers. Ext. 263.
Residence: 2504 Vanderbilt. Telephone 2-1022.

*Stuart, N. B.—Foreman, Service Dept. Warehouse. Ext. 272.
Residence: Route 1, Cary, N. C.

*Stuckey, J. L.—Prof., Head Geol. E. 1 Primrose. Ext. 304.
Residence: 1911 Sunset Dr. Telephone 2-0187.

Sturdivant, Dorothy E., Jr. Clerk, Stat. 340-1911. Ext. 313.
Residence: 116 St. Mary's.

*Sumner, Mrs. Baye, Asst. Purc. Agent. Holladay. Ext. 230.
Residence: 1901 Glenwood Ave. Telephone 6984.

Sutton, Lenora—Stenog., Bot. 220 Winston. Ext. 267.
Residence: 1616 Hillsboro. Telephone 2-2420.

Sutton, P. P.—Instr., Chem. 20 Withers. Telephone 256.
Residence: 15 S. Boylan Ave. Telephone 3-2233.

Taylor, H. W.—Specialist, Ext. Market. 123-1911. Ext. 306.
Residence: 2820 Bedford Ave. Telephone 2-3274.

Teague, K. H. Tch. Fel., Geol. 2 Primrose. Ext. 304.
Residence: 102 Fourth. Telephone 2-2853.

Thomas, C. D.—Asst. Farm Mgt. Specialist. 308-1911. Ext. 291.
Residence: 107 Chamberlain. Telephone 7468.

Thomas, H. C. Tech. Sgt., U. S. Army, Mil. Armory Gym.
Residence: Powell Dr. Telephone 2-2895.

Thomas, Mary E. Nutritionist, Home Dem., Agr. Ext. 219-1911. Ext. 242.
Residence: 221 Hawthorne Rd. Telephone 2-3742.

Thomas, R. H.—St. Supervisor, Voc. Agr. Ed. 106 Tompkins. Ext. 282.
Residence: 225 Furches. Telephone 4098.

Thompson, Daisy W. Chief Clerk, Asst. Controller. 106 Holladay. Ext. 316.
Residence: 1117 Hillsboro. Telephone 9879.

Thompson, Frances Secty., Agr. Ext. 222 1911. Ext. 242.
Residence: 109 E. Whitaker Mill Rd. Telephone 4693.

Thorne, Hazel—Clerk, Ath. Pub. Owen. Ext. 217.
Residence: 2056 Clark Ave. Telephone 4395.

Thornton, Mrs. Labon—Secty., Voc. Agr. Ed. 106 Tompkins. Ext. 282.
Residence: 303 Calvin Rd. Telephone 2-3850.

Tingen, Edith—Stenog., Agr. Ec. 117-1911. Ext. 308.
Residence: 128 Forest Rd. Telephone 2-1108.

Tucker, H.—Prof., H. E., Engr. Exp. Sta. (On Leave). 207 C. E. Ext. 307.
Residence: 20 Logan Ct. Telephone 6219.

Turner, Anne L.—Order Librarian. Library. Ext. 259.
Residence: 903 W. Johnson. Telephone 6997.

Upchurch, C. A., Jr., News Bureau. 13 Ricks. Ext. 253.
Residence: 2505 Everett Ave. Telephone 9917.

Valentine, Elizabeth A. Arch. Librarian. 304 Daniels. Ext. 250.
Residence: Rt. 5, Raleigh, N. C. Telephone 6346.

Van Leer, B. R., Dean, Sch. of Engr. 122 C. E. Ext. 216.
Residence: 2830 Exeter Circle. Telephone 2-2767.

Van Note, W. G.—Asst. Prof., Ch. E. 112-A Winston. Ext. 301.
Residence: 2214 Whitaker Dr. Telephone 3 1394.

Vann, J. G., Asst. Controller. 107 Holladay. Ext. 295.
Residence: 1606 Scales St. Telephone 6240.

Vaughan, L. L. Prof., Head M. E. 109 Page. Ext. 246.
Residence: 11 Enterprise. Telephone 5449.

Veach, E. K.—Tch. Fel., Teach. Ed. 105 Tompkins. Ext. 256.
Residence: 103 Park Ave. Telephone 3-1830.

Veerhoff, O. Asso. Hort., Agr. Exp. Sta. 309 Polk. Ext. 275.
Residence: 2830 Mayview Rd. Telephone 2-2240.

Vestal, E. V.—Swine Specialist, A. H. Ext. 201 Polk. Ext. 269.
Residence: 3125 Stanhope Ave. Telephone 2-0120.

Viets, Dorothydean Lab. Tech., Zool. 104 Zool. Ext. 239.
Residence: 407 S. Boylan Ave. Telephone 2-3802.

Volkerding, B. F.—Tch. Fel., Bot. 215 Winston. Ext. 267.
Residence: 123 Brooks Ave. Telephone 8764.

*Von Glahn, J. L.—Bus. Mgr., Ath. Gym. Telephone 2-2407.
Residence: Canterbury Rd. Telephone 5891.

*Wakeley, J. T.—Res. Asst., Stat. 325-1911. Ext. 313.
Residence: Dixie Trail. Telephone 5888.

Wall, Alice—Clerk, Ext. Studies. 108 Ricks. Ext. 255.
Residence: Wake Forest. Telephone Wake Forest 3151.

*Wall, Nina A.—Jr. Clerk, Stat. 340-1911. Ext. 313.
Residence: Rt. 2, Raleigh, N. C.

*Waller, E. M.—Asst. Prof., Ath. P. E. Gym. Ext. 218.
Residence: 115 Chamberlain. Telephone 2-1502.

*Ward, Mrs. Hazel M. Bookkeeper, Asst. Controller. 105 Holladay. Ext. 316.
Residence: Rt. 5, Raleigh, N. C.

*Warren, R. S. Head Coach, Basketball, Fr. Football. Gym. Telephone 2-2407.
Residence: 121 Montgomery. Telephone 9985.

Watson, C. K. Tch. Fel., Tex. Basement, Tex. Ext. 288.
Residence: 16 Enterprise. Telephone 2-2247.

Watson, Emma L. (Mrs.)—Clerk. Asst. Controller. 106 Holladay. Ext. 298.
Residence: Cary, N. C. Telephone 2841.

*Watson, L. P. Ext. Hort. 301 Polk. Ext. 275.
Residence: 2809 Bedford Ave. Telephone 2841.

*Watts, N. B.—Self-Help Secty., Y. M. C. A. Y. M. C. A. Telephone 7184.
Residence: 2809 Kilgore. Telephone 6986.

Weathers, Rachel Clerk, Ext. Studies. 108 Ricks. Ext. 255.
Residence: 1616 Hillsboro. Telephone 2-2420.

*Weaver, D. S.—Prof., Head, Agr. E. Dept. 316 Ricks. Ext. 274.
Residence: 520 Daughtridge. Telephone 4110.

*Weaver, J. G.—Asst. Prof., Hort. Greenhouse. Ext. 240.
Residence: 707 N. East St. Telephone 2-1440.

*Weeks, L. T.—Tobacco Specialist, Agr. Ext. 206 Ricks. Ext. 294.
Residence: 3201 Ruffin. Telephone 3-1898.

*Wellons, T. T.—Supt., Dormitories. Warehouse. Ext. 272.
Residence: 3302 Clarke Ave. Telephone 3-2478.

*Wells, B. W.—Prof., Head Bot. 218 Winston. Ext. 267.
Residence: 1605 Park Dr. Telephone 8746.

Wells, Jean—Stenog., E. M. 101 C. E. Ext. 317.
Residence: 1605 Park Dr. Telephone 8746.

West, Gladys F.—Jr. Botanist, U.S.D.A. 104 Polk. Ext. 300.
Residence: 407 Horne. Telephone 3-1206.

*West, J. F.—Instr., Geol. Engr. 2 Primrose. Ext. 304.
Residence: 510 Dixie Trail. Telephone 2-3063.

*Wheeler, F. B.—Prof., Practical Mechs., Supt., Shops. Shops. Ext. 245.
Residence: 20 Maiden Lane. Telephone 7958.

*Wheless, M. H.—Bookkeeper, Supply Store. Y. M. C. A. Ext. 225.
Residence: 20 Turner St. Telephone 8053.

Whisnant, Mamie N.—Specialist, Home Dem., Agr. Ext. 221-1911. Ext. 242.
Residence: S-5 Raleigh Apts. Telephone 6169.

*White, R. C.—Instr., Ch. 103 Withers. Ext. 265.
Residence: 317 Calvin Rd. Telephone 9582.

*Wood, W. A.—Asst. Coach, Football. Fieldhouse. Telephone 6934.
Residence: Joslin Apts. Telephone 3-2388.

Wood, T. W. Asso. Prof., Ec. 104 Peele. Ext. 223.
Residence: 210 Groveland.

Woodhouse, W. W. Asst. Agron. 114 Ricks. Ext. 262.
Residence: 3209 Hillsboro. Telephone 4544.

Wright, J. B. Electrician, Service Dept. Warehouse. Ext. 272.
Residence: Western Blvd. Telephone 4883.

Wyman, L. Prof., For. 305 Ricks. Ext. 270.
Residence: 1837 White Oak Rd. Telephone 8953.

Wynn, W. K. Asst. Prof., Eng. 107 Pullen. Ext. 237.
Residence: 2701 Barmettler.

Wynne, R. B. Instr., Eng. 108 Pullen. Ext. 237.

Young, Mrs. C. H. Stenog., A. H. Ext. 202 Polk. Ext. 269.
Residence: 2303 Clark Ave. Telephone 8083.

Young, Elizabeth Secty., Teach. Ed. 119 Tompkins. Ext. 256.
Residence: Smithfield, N. C. Telephone Smithfield 170-J.

*Zehmer, Mrs. W. K.—Secty., Dairy Investig. 213 Polk. Ext. 305.
Residence: 2428 E. Lake Dr. Telephone 2-1961.

---

* Married.

*Whitehead, L. C. Reg. Agent, F&WS., Dept. of Interior. 203-B Zool. Ext. 261.
Residence: 2613 Van Dyke. Telephone 4455.

Whiteley, E. L. Res. Fel. 318 1911. Ext. 262.
Residence: 6 Enterprise. Telephone 4788.

Whitford, L. A.—Asst. Prof.. Bot. 201 Winston. Ext. 267.
Residence: 2804 Barmettler. Telephone 8189.

Whitten. H. A. Tch. Fel., Ch. 202 Withers. Ext. 264.
Residence: 306 Fourth. Telephone 2-2853.

*Williams, C. B. Agronomist. 117 Ricks. Ext. 262.
Residence: 1405 Hillsboro. Telephone 8893.

*Williams, C. F. Asso. Hort. 305 Polk. Ext. 275.
Residence: 1912 Lewis Circle. Telephone 2-0233.

*Williams, F. C., 1st Lt., Asst. PMS&T. 11 Holladay. Ext. 314.
Residence: 809 W. Drive. Telephone 7389.

*Williams, H. Page Asso. Prof., Math. 223 Tompkins. Ext. 228.
Residence: 1015 Brooks Ave. Telephone 2-2191.

*Williams, H. T.—Binder, Print Shop. Tompkins. Ext. 281.
Residence: 2 E. Peace St. Telephone 3-1181.

*Williams, L. F. Prof., Ch. 301 Withers. Ext. 297.
Residence: 1816 Park Dr. Telephone 8075.

Williams, Lucie R.—Clerk, Ch. 217 Withers. Ext. 297.
Residence: 1015 W. Peace. Telephone 7559.

*Williams, N. W. Asst. Prof., Poul. 214 Ricks. Ext. 280.
Residence: Poul. Plant. Telephone 8686.

*Williams, Sam L.—Asst., A. H. Ext. 203 Polk. Ext. 269.
Residence: 15 Dixie Trail. Telephone 2-0804.

Williamson, Christine—Stenog., Ext. Pubs. 5 Ricks. Ext. 279.
Residence: 533 N. Blount. Telephone 4166.

*Willis, Mrs. Esther G.—S. W. Dist. Agent, Home Dem., Agr. Ext. 210-1911. Ext. 243.
Residence: 2902 Everett Ave. Telephone 2-1476.

*Wilson, A. J.—Prof., Head Ch. 107 Withers. Ext. 266.
Residence: 1808 Park Dr. Telephone 7125.

Wilson, Agnes W. Asst. Clerk, Stat. 333 1911. Ext. 313.
Residence: F-1 Raleigh Apts. Telephone 6931.

*Wilson, T. L. Asst. Prof., Eng. 12 Peele. Ext. 237.
Residence: 407 Calvin Rd. Telephone 6951.

*Winchester, R. B.—Asst. Supt., Voc. Ed. 109 Tompkins. Ext. 311.
Residence: 2409 Stafford. Telephone 9659.

*Winkler, E. W.—Asst. Prof., E. E. 105 Daniels. Ext. 235.
Residence: 509 Daughtridge. Telephone 2-1370.

*Winstead, S. W. Repairman, Service Dept. Power Plant. Ext. 234.
Residence: Rt. 4, Raleigh, N. C.

*Winston, Sanford—Prof., Soc. 202 Peele. Ext. 231.
Residence: 120 Forest Rd. Telephone 2-1402.

*Winton, L. S.—Asso. Prof., Math. 223 Tompkins. Ext. 228.
Residence: 604 Dixie Trail. Telephone 2-2992.

*Witmer, S. B. Loom Fixer, Tex. 2nd floor, Tex. Ext. 273.
Residence: Cary, N. C.

NEW STUDENTS REGISTERED SECOND TERM 1941-1942 (CONTINUED)

McDEVETT, FRAZIER THOMAS, JR.	So., B. D.	GEN. ENGR.		WASHINGTON
McDONALD, MONNIE	GRAD.	OCCUP. INF. & GUID.		RALEIGH
McKEEL, CHARLES BAYNOR, III	FR., B. D.	ELEC. ENGR.		CHARLOTTE
MANNING, FREDERICK GENE	FR., B. D.	MECH. ENGR.		WINTERVILLE
MARTIN, TRAVIS JONES	So., B. D.	TEXTILES		WALKERTOWN
MATTOCKS, RUDOLPH GRAHAM	FR., B. D.	CHEM. ENGR.		RALEIGH
MEWBORN, JOSHUA E., JR.	So., B. D.	AGRI.		SNOW HILL
MILLER, HERBERT CRAIG, JR.	So., B. D.	CHEM. ENGR.		MOORESVILLE
MUSGRAVE, ROBERT BURNS	GRAD.	F. C. & PL.	BREED.	RUTSONVILLE, ILL.
NANCE, HOYTE FRANKLIN	FR., B. D.	GEN. ENGR.		CORNELIUS
NEGRON, HENRY	So., B. D.	CIVIL ENGR.		SANTURCE, P. R.
OSBORNE, LOUISE SMAW (MRS.)	GRAD.	OCCUP. INF. & GUID.		RALEIGH
OWENS, MARIUS COPEL	FR., B. D.	ELEC. ENGR.		ELIZABETH CITY
PARKER, JAMES VIRGIL	SEN.	CHEM. ENGR.		ASHEVILLE
PARKER, WILLIAM TERRY	FR., B. D.	AERO. ENGR.		LEXINGTON
PATTERSON, LYNN CLIFFORD	FR., B. D.	AGRI. EDUC.		HIDDENITE
PATTON, GEORGE E.	JUN.	LAND. ARCH.		FRANKLIN
PIERCE, J. C., JR.	GRAD.	ANIM. PROD.		CRASSY CREEK
PRIMM, GERALD CAUDLE	FR., B. D.	AERO. ENGR.		ROCKY MOUNT
REID, HUGH KIRKPATRICK	FR., B. D.	ELEC. ENGR.		CHARLOTTE
ROEBUCK, WILLIAM RUSSELL	FR., B. D.	GEN. ENGR.		ROBERSONVILLE
RUNNION, HELEN	GRAD.	OCCUP. INF. & GUID.		RALEIGH
SAWYER, WILLIAM EARLE	So., B. D.	TEXTILES		COLUMBUS
SHAW, KENDALL JONES	GRAD.	PLANT PATH.		RALEIGH
SHOE, GEORGE DAVID	So., B. D.	ELEC. ENGR.		SALISBURY
SIMMONS, JOHN MANN	So., B. D.	MECH. ENGR.		GREENSBORO
SMITH, HAROLD ALLYN	FR., B. D.	MECH. ENGR.		WHITEVILLE
SPEARS, SIMMS MEMORY	So., B. D.	CHEM. ENGR.		WHITEVILLE
STALLINGS, JUNIUS BRUCE	FR., B. D.	MECH. ENGR.		KINSTON
STAMEY, HOWARD MURRAY	SEN.	F. C. & PL.	BREED.	CANTON
STARNES, WILLIAM FOSTER, JR.	So., B. D.	AERO. ENGR.		CHERRYVILLE
STEPHENSON, THOMAS NEBLETT	So., B. D.	MECH. ENGR.		RALEIGH
STEWART, ABNER THOMAS	So., B. D.	CHEM. ENGR.		WASHINGTON
STRAWBRIDGE, EULIS MACON	So., B. D.	MECH. ENGR.		DURHAM
STUART, ARCHIE D.	AUDITOR			RALEIGH
STUART, ROBERT FRANKLIN, JR.	So., B. D.	AGRI. EDUC.		ROWLAND
SULLAM, VICTOR	GRAD.	AGRI. ECON.		RALEIGH
TURNER, GEORGE HUBERT	So., B. D.	AGRI.		RALEIGH
TUSSEY, CARL BRUCE	FR., B. D.	TEXTILES		LEXINGTON
UNDERWOOD, MYRTLE AMELIA	AUDITOR			RALEIGH
VALENTINE, MELTON E.	SEN.	AGRI. CHEM.		RALEIGH
WARD, RICHARD BRUCE, JR.	FR., B. D.	ELEC. ENGR.		CHARLOTTE
WELLONS, ALICE FINLEY	GRAD.	OCCUP. INF. & GUID.		RALEIGH
WICK, GEORGE DENNICK, III	FR., B. D.	FORESTRY		TRYON
WILLIAMS, ALVA EDISON	GRAD.	AGRI. EDUC.		DURHAM
WILLIAMS, MYRA A.	AUDITOR			RALEIGH
WILLIAMS, WILLIAM EARL	So., B. D.	AERO. ENGR.		COATS
WILLIAMSON, ANNIE (MRS.)	SPECIAL - NO CREDIT			FAYETTEVILLE
WILSON, JOHN ALLISON	So., B. D.	FLORI.		LOUISBURG
WINCHESTER, DEWEY REECE	So., B. D.	CHEM. ENGR.		MONROE
WOOD, THOMAS LANIER, JR.	FR., B. D.	TEXTILES		WINSTON-SALEM
WOODARD, GEORGE VERNON	So., B. D.	AGRI.		SPRING HOPE

NEW STUDENTS REGISTERED THIRD TERM 1941-1942

ARBIB, RALPH	FR., B. D.	AGRI.		NEW YORK, N. Y.
BLACKWELL, ELWOOD TOY	So., B. D.	ELEC. ENGR.		OXFORD
BOSTIC, MARLOW FAIRINGTON	So., B. D.	AGRI. EDUC.		MAGNOLIA
BROWER, EDWIN NEIL, JR.	JUN.	TEX. MFG.		HOPE MILLS
COPELAND, WILLIAM NEIL	SEN.	ELEC. ENGR.		TIMMONSVILLE, S.C.
COX, HARVEY ATKINSON, JR.	FR., B. D.	MECH. ENGR.		MAYODAN
DONALD, KENNETH	So., B. D.	CHEM. ENGR.		ASHEVILLE
EDGERTON, JACK SLAUGHTER	So., B. D.	AERO. ENGR.		GOLDSBORO
ELDRIDGE, VIRGINIA A.	GRAD.	OCCUP. INF. & GUID.		RALEIGH
FISCHER, JEROME MORTON	FR., B. D.	CHEM. ENGR.		BROOKLYN, N. Y.
FORNES, ROY LANCE	SEN.	AGRI. EDUC.		KNIGHTDALE
HARTSOE, JOSEPH DELLA	So., B. D.	CHEM. ENGR.		WELDON
HODNETT, SAMUEL AYERS	So., B. D.	CHEM. ENGR.		DURHAM

(CONTINUED ON NEXT SHEET)

NEW STUDENTS REGISTERED SECOND TERM 1941-1942

NAME	CLASSIFICATION			HOME ADDRESS
ALEXANDER, ELIAS SCARR, JR.	FR.,	B. D.	AERO. ENGR.	DURHAM
ALEXANDER, WAYNE D.	SO.,	B. D.	TEXTILES	CONCORD
ALLEN, RUFUS COUCH	FR.,	B. D.	OCCUP. INF. & GUID.	RALEIGH
ANDERSSEN, GEORGE ELMER	JUN.		MECH. ENGR.	MERCHANTVILLE
ARMSTRONG, BEN LINDSEY	FR.,	B. D.	GEN. ENGR.	RALEIGH
ARMSTRONG, DAVID ALLEN	FR.,	B. D.	AERO. ENGR.	RALEIGH
BEAM, CLARENCE C.	SO.,	B. D.	AGRI. EDUC.	LAWNDALE
BEDDINGFIELD, NANCY ADELAIDE	GRAD.		OCCUP. INF. & GUID.	RALEIGH
BENDER, ERNEST LINWOOD, JR.	FR.,	B. D.	TEXTILES	NEW BERN
BLACK, ARTHUR EDWARD, JR.	FR.,	B. D.	MECH. ENGR.	THOMASVILLE
BRADSHAW, CHARLES WILLIAM	FR.,	B. D.	AERO. ENGR.	RALEIGH
BRIGGS, JOE FLOYD	FR.,	B. D.	ARCH.	LEXINGTON
BROOKS, PAUL ALLEN	JUN.		CHEM. ENGR.	ALBEMARLE
BRYAN, JENNINGS MACKERAL, JR.	SO.,	B. D.	TEXTILES	BURLINGTON
BRYANT, FRANCES FLYTHE	GRAD.		OCCUP. INF. & GUID.	RALEIGH
BULLARD, ERVIN TROWBRIDGE	SO.,	B. D.	AGRI.	CENTRAL VALLEY, N.Y.
CELL, JOHN W.	AUDITOR			RALEIGH
CHALFANT, JESSE WAYNE	AUDITOR			RALEIGH
CHARNOCK, FORREST PAUL	FR.,	B. D.	CER. ENGR.	ASHEVILLE
CHRONISTER, BORDEN SEARCY	GRAD.		SOILS	WALNUT RIDGE, ARK.
CLAPP, PARMLY SCOFIELD, III	FR.,	B. D.	TEXTILES	HARTFORD, CONN.
CLARK, ROBERT BARRY	FR.,	B. D.	AERO. ENGR.	WELDON
COLE, ALBERT B.	FR.,	B. D.	FORESTRY	DENTON
COUGHRAN, EDWIN KNOWLTON	GRAD.		F. C. & PL. BREED.	RALEIGH
CRAWFORD, MARIANNE C.	GRAD.		OCCUP. INF. & GUID.	RALEIGH
CURRY, GEORGE WASHINGTON, JR.	FR.,	B. D.	CHEM. ENGR.	LEXINGTON
CUTCHIN, DANFORD EDMONDSON	SO.,	B. D.	IND. ARTS EDUC.	WHITAKERS
DAUGHTRY, JAMES FREDERICK, JR.	SO.,	B. D.	AGRI. CHEM.	RALEIGH
DEAN, CLIFFORD T., JR.	SO.,	B. D.	AGRI. EDUC.	LOUISBURG
DICKSON, BENJAMIN HEDGEPETH	FR.,	B. D.	MECH. ENGR.	RALEIGH
DIXON, WILLIAM JENNINGS, JR.	FR.,	B. D.	AERO. ENGR.	CHARLOTTE
DUDLEY, CAMERON RIGBY	SO.,	B. D.	ARCH.	KINSTON
DUFF, WILLIAM POWELL, JR.	JUN.		TEX. MGT.	ELIZABETH CITY
EDWARDS, EUGENE SIMPSON, JR.	FR.,	B. D.	AGRI.	HOOKERTON
ELLIS, WILLIAM JAMES, JR.	SO.,	B. D.	FORESTRY	PHILADELPHIA, PA.
ESKRIDGE, ELOISE GRADY (MRS.)	GRAD.		OCCUP. INF. & GUID.	RALEIGH
FERRATTI, PATRICIA ANNE	FR.,	B. D.	AGRI. CHEM.	RALEIGH
FLETCHER, LUCILE COOLEY (MRS.)	GRAD.		OCCUP. INF. & GUID.	RALEIGH
FONVILLE, MARY SUE BEAM	GRAD.		OCCUP. INF. & GUID.	RALEIGH
FULCHER, OPHUS MARTIN	SO.,	B. D.	ANIM. PROD.	LEAKSVILLE
GEHRKE, EDWARD JAMES	SO.,	B. D.	CHEM. ENGR.	GREENSBORO
GILMORE, LUCY ELIZABETH	GRAD.		OCCUP. INF. & GUID.	RALEIGH
GITHENS, LEROY FRETZ	SO.,	B. D.	FORESTRY	ASHLAND, N. J.
GLAHN, RAY MERRITT	SO.,	B. D.	WLD. CONS. & MGT.	NORTH POINT, L. I. N.Y.
GLUCK, HOWARD	FR.,	B. D.	CIVIL ENGR.	BALTIMORE, MD.
GODWIN, MARGARETTE BERTHA	GRAD.		OCCUP. INF. & GUID.	RALEIGH
GRAY, LELAND THOMAS, JR.	FR.,	B. D.	AERO. ENGR.	WASHINGTON
GREGSON, RAYMOND THOMAS	GRAD.		OCCUP. INF. & GUID.	RALEIGH
HALL, RUTH B.	GRAD.		OCCUP. INF. & GUID.	RALEIGH
HALTIWANGER, JOHN COUCH	FR.,	B. D.	MECH. ENGR.	WINSTON-SALEM
HAMILTON, JAMES LINTON, JR.	FR.,	B. D.	MECH. ENGR.	CHARLOTTE
HAZELBERG, VERGIE W.	JUN.		AGRI. ECON.	RALEIGH
HEBERT, TEDDY T.	GRAD.		PLANT PATH.	RALEIGH
HELMS, H. A.	AUDITOR			RALEIGH
HENDERSON, HARVEY C., JR.	SO.,	B. D.	AERO. ENGR.	CHARLOTTE
HENDERSON, JAMES WARREN	FR.,	B. D.	CHEM. ENGR.	LUMBERTON
HERRICK, LEE WALDO, JR.	GRAD.		POULTRY SCIENCE	RALEIGH
HISEY, WILLIAM EDWARD, JR.	FR.,	B. D.	FORESTRY	SHENANDOAH, VA.
HUNNINGS, LEON D., JR.	JUN.		AGRI. ENGR.	NEW BERN
INGLE, ROY SAMUEL	SEN.		GEOL. ENGR.	STATESVILLE
JOYNER, CHRISTINE VICK	GRAD.		OCCUP. INF. & GUID.	RALEIGH
KITTNER, HARRY	SO.,	B. D.	GEN. ENGR.	WELDON
KLAUBER, STANLEY	FR.,	B. D.	AERO. ENGR.	BROOKLYN, N. Y.
LANCASTER, DORA	GRAD.		OCCUP. INF. & GUID.	RALEIGH
LARABEE, HELEN WINSLOW (MRS.)	GRAD.		OCCUP. INF. & GUID.	RALEIGH
LEWIS, JOHN ARTHUR	FR.,	B. D.	MECH. ENGR.	BETHLEHEM, PA.
LYNN, PAUL H.	FR.,	B. D.	CHEM. ENGR.	RICHMOND, VA.

STUDENT DIRECTORY

1941-1942

Name	*Classification*	*School Address*	*Home Address*
Abernathy, J. L.	1 Aero.	115 Woodburn Rd.	Murphy, N. C.
Abernethy, J. C., Jr.	1 Ag.	119 7th, Box 3319	Hickory, N. C.
Abrams, J. T.	1 Ag. Ed.	2 South, Box 3598	Macclesfield, N. C.
Abrams, Murry	2 M. E.	231 C, Box 4159	Far Rockaway, N. Y.
Adair, G. H.	1 Aero.	310 9th, Box 4330	Beaufort, N. C.
Adair, R. B.	4 Cer.	125 Woodburn Rd.	Beaufort, N. C.
Adams, E. A.	3 Aero.	2220 Circle	Raleigh, N. C.
Adams, H. B.	1 Ag. Ed.	321 C, Box 4283	Hendersonville, N. C.
Adams, H. M.	1 Engr.	103 10th, Box 4403	Winston-Salem, N. C.
Adams, J. R.	2 C. E.	310 South, Box 3574	Greensboro, N. C.
Adams, P. G.	4 Tex.	315 South, Box 3579	Greensboro, N. C.
Adams, R. C.	3 Ag. Ed.	309 5th, Box 3233	Randleman, N. C.
Adams, R. D.	4 Ag.	120 South, Box 3520	Willow Springs, N. C.
Adams, W. G.	1 E. E.	2232 Hillsboro St.	South Richmond, Va.
Addington, B. A.	3 Ag.	208 6th, Box 3256	Franklin, N. C.
Adkins, J. E.	2 M. E.	2202 Hillsboro St.	Summerfield, N. C.
Aldridge, L. E.	1 M. E.	309 9th, Box 4329	Elkin, N. C.
Aldridge, R. W.	1 Ag.	Dairy Barn, Box 5127	Alarka, N. C.
Alexander, H. G.	1 Tex.	218 8th, Box 3752	Charlotte, N. C.
Alexander, J. B.	1 M. E.	201 10th, Box 4410	Charlotte, N. C.
Alexander, J. H., III	2 M. E.	103 C, Box 4202	Scotland Neck, N. C.
Alexander, J. W.	2 Aero.	310 South, Box 3574	Charlotte, N. C.
Alexander S. D.	2 Ag.	122 C, Box 4219	Matthews, N. C.
Alford, N. C.	1 Ch. E.	1904½ Hillsboro St.	Raleigh, N. C.
Allen, B. H.	3 Ag. Ed.	216 A, Box 4145	Matthews, N. C.
Allen, C. M.	1 Aero.	231 8th, Box 3765	Charlotte, N. C.
Allen, F. C.	3 Tex.	225 C, Box 4253	Wadesboro, N. C.
Allen, F. D.	4 Ag.	11 South, Box 3607	Marshville, N. C.
Allen, G. W., Jr.	1 M. E.	301 9th, Box 4321	Kings Mountain, N. C.
Allen, H. A., Jr.	2 Engr.	12½ Horne St.	Charlotte, N. C.
Allen, J. A.	2 I. E.	2112 Woodland Ave.	Raleigh, N. C.
Allen, R. M., Jr.	3 Aero.	116 Hawthorne Rd.	Raleigh, N. C.
Allen, R. R.	4 Ag. Ed.	5 Enterprise St.	Council, N. C.
Allen, R. W.	1 Aero.	108 8th, Box 3708	Belhaven, N. C.
Allen, W. R.	2 E. E.	128 A, 4123	Badin, N. C.
Alles, G. J.	2 C. E.	326 C, Box 4288	Wilmington, N. C.
Alley, S. V.	1 E. E.	308 8th, Box 3776	Hickory, N. C.
Alley, W. D.	1 Aero.	119 7th, Box 3319	Mt. Airy, N. C.
Alley, W. R., Jr.	1 M. E.	303 9th, Box 4323	Marion, N. C.
Allison, J. W.	2 Ag. Ed.	316 South, Box 3580	Davidson, N. C.
Allison, R. E.	2 Aero.	3 Maiden Lane	Sylva, N. C.
Allred, W. B.	3 Ch. E.	204 6th, Box 3252	Badin, N. C.
Almond, E. K.	2 Ag.	21 South, Box 3617	Albemarle, N. C.
Almond, Newell	1 Ag.	323 8th, Box 3791	Albemarle, N. C.
Althaus, K. G., Jr.	2 Ch. E.	2405 Clark Ave.	Fort Bliss, Tex.
Altsheler, Seymour	3 Tex.	2304 Clark Ave.	Newark, N. J.
Amos, H. L.	1 Tex.	221 8th, Box 3755	Greensboro, N. C.
Anderson, E. W.	1 Ch. E.	223 7th, Box 3355	Tarboro, N. C.
Anderson, W. J.	1 Ag.	112 7th, Box 3312	Hayesville, N. C.
Andrews, B. G.	5 Ag. Ec.	202 Groveland Ave.	Raleigh, N. C.
Andrews, C. H., Jr.	3 Aero.	509 Burton St.	Raleigh, N. C.
Andrews, H. P.	4 Ch. E.	303 4th, Box 3129	Lumberton, N. C.
Andrews, J. L.	2 Tex.	1408 Hillsboro St.	Bonlee, N. C.
Andrews, J. W., Jr.	4 M. E.	4 Ferndell Lane	Greensboro, N. C.
Andrews, M. J.	2 C. E.	107 9th, Box 4307	Brooklyn, N. Y.
Andrews, T. B., Jr.	1 Aero.	1 9th, Box 4334	Mt. Gilead, N. C.

Name	*Classification*	*School Address*	*Home Address*
Angelo, W. E.	4 Ch. E.	116 Wat., Box 3016	Winston-Salem, N. C.
Ankers, R. E.	4 E. E.	304 5th, Box 3228	Falls Church, Va.
Appleberry, C. M., Jr.	2 Ch. E.	106 5th, Box 3206	Wilmington, N. C.
Arey, J. A., Jr.	3 Tex.	5 Maiden Lane	Raleigh, N. C.
Armstrong, A. A., Jr.	2 Ch. E.	233 C, Box 4260	Gastonia, N. C.
Armstrong, C. B., Jr.	1 Aero.	6 Ferndell Lane	Davidson, N. C.
Armstrong, C. P.	2 E. E.	209 5th, Box 3221	Davidson, N. C.
Arnaiz, Manuel, Jr	2 Aero.	301 S. Person St.	Raleigh, N. C.
Arnstein, F. F.	1 Ag.	119 Hawthorne St.	Asheville, N. C.
Arrington, L. J.	5 Ag. Ec.	2706 Kilgore St.	Turin Falls, Idaho
Arrowood, D. R.	1 Tex.	8 Field House	Concord, N. C.
Arthurs, E. C., Jr.	1 Ag.	4 Maiden Lane	Charlotte, N. C.
Asbury, H. O.	1 Aero.	202 8th, Box 3736	Charlotte, N. C.
Asbury, T. R.	2 Ch. E.	206 Chamberlain St.	Charlotte, N. C.
Ashley, W. C.	1 Ag.	205 7th, Box 3337	New Bedford, Mass.
Ataman, O. S.	5 Tex.	Grosvenor Gardens Apts.	Tzmir, Turkey
Atkins, R. L.	1 C. E.	28 Dixie Trail	Raleigh, N. C.
Atkinson, G. S., Jr.	4 C. E.	2306 Hillsboro St.	Fayetteville, N. C.
Atkinson, R. A., Jr.	3 Arch. E.	135 C, Box 4230	Winston-Salem, N. C.
Auman, F. E.	4 Ag. Ed.	205 5th, Box 3217	West End, N. C.
Ausman, R. P.	3 M. E.	212 Wat., Box 3030	Phoenix, N. Y.
Austin, R. W., Jr.	3 Aero.	221½ Forest Rd.	Raleigh, N. C.
Austin, W. R.	4 Ag. Ed.	109 5th, Box 3209	Peachland, N. C.
Austin, W. St. C.	2 E. E.	125 A, Box 4128	Brevard, N. C.
Avera, S. T.	1 Ag.	317 A, Box 4180	Smithfield, N. C.
Avera, W. W.	4 Aero.	17 Enterprise St.	Rocky Mount, N. C.
Avery, P. S.	4 Ag.	214 Wat., Box 3032	Morganton, N. C.
Avery, R. M., Jr.	1 Ch. E.	114 Wat., Box 3011	Winston-Salem, N. C.
Aycock, Robert	5 Ag. Pl. Path.	106 Horne St.	Lisbon, La.
Baggett, D. D.	3 Ag.	111 South, Box 3511	Dunn, N. C.
Bagwell, J. F.	1 Aero.	22 8th, Box 3823	Washington, N. C.
Bahen, J. B., Jr.	2 C. E.	106 Horne St.	Washington, D. C.
Bailey, E. A., Jr.	5 Ag. Ch.	202 4th, Box 3120	La Grange, Ga.
Bailey, E. W.	2 Ch. E.	227 South, Box 3559	Goldsboro, N. C.
Bailey, J. R.	2 Aero.	125 Woodburn Rd.	Rocky Mount, N. C.
Bailey, J. W., Jr.	2 Aero.	617 Aycock St.	Raleigh, N. C.
Bailey, W. H.	2 Ag.	103 4th, Box 3113	Apex, N. C.
Bain, W. A.	Aud.	U 7 Raleigh Apts.	Raleigh, N. C.
Baise, W. V., Jr.	4 E. E.	310 W. Whitaker Mill Rd.	Raleigh, N. C.
Bakan, Alexander	1 Ag.	210 South, Box 3542	Burgaw, N. C.
Baker, H. M.	2 Aero.	4 Ferndell Lane	High Point, N. C.
Baker, P. G.	4 M. E.	201 South, Box 3533	Verona, N. J.
Baker, P. W.	1 Tex.	308 9th, Box 4328	Charlotte, N. C.
Balamoutis, F. N.	2 Ind. A.	229 South, Box 3561	Spartanburg, S. C.
Ball, J. T., Jr.	2 Aero.	313 A, Box 4176	Raleigh, N. C.
Ball, T. W.	2 Aero.	4 South, Box 3600	Charlotte, N. C.
Ballance, W. C.	3 Geol.	230 A, Box 3227	Portsmouth, Va.
Ballard, C. W.	2 Tex.	302 Wat., Box 3042	Oxford, N. C.
Ballard, L. H.	3 Tex.	201 C, Box 4232	Wilmington, N. C.
Banadyga, A. A.	4 Ag.	127 South, Box 3527	Burgaw, N. C.
Banks, Mitchiner	2 Ag. Ed.	206 6th, Box 3228	Franklinton, N. C.
Banks, M. K.	4 Geol.	130 Hawthorne Rd.	Greensboro, N. C.
Bannerman, P. E.	2 Ag.	127 South, Box 3527	Carolina Beach, N. C.
Barbee, G. H., Jr.	2 Tex.	114 C, Box 4211	Winston-Salem, N. C.
Barber, J. C., Jr.	1 M. E.	120 7th, Box 3320	Barber, N. C.
Barber, J. E.	1 Aero.	Withdrew	Clayton, N. C.
Barefoot, O. A.	1 Ag.	11 8th, Box 3813	Benson, N. C.
Barkley, W. H.	1 Aero.	Route 2	Raleigh, N. C.
Barksdale, W. D.	3 I. E.	2407 Clark Ave.	Bluefield, W. Va.
Barnes, F. P.	1 C. E.	301 5th, Box 3225	Henderson, N. C.
Barnes, R. C.	5 Entom.	119 Montgomery St.	Summerfield, Ohio

Name	*Classification*	*School Address*	*Home Address*
Barnes, V. M., Jr.	1 E. E.	14 8th, Box 3816	Wilson, N. C.
Barnhardt, W. W.	2 Ch. E.	104 C, Box 4203	Winston-Salem, N. C.
Barnhill, J. B.	3 Ag.	212 5th, Box 3216	Scotland Neck, N. C.
Barr, J. M.	2 Tex.	239 A, Box 4165	Charlotte, N. C.
Barrett, F. M.	3 Ag. Ed.	2316 Hillsboro St.	Macon, N. C.
Barrier, G. H.	4 Tex.	4 Maiden Lane	Mt. Pleasant, N. C.
Barrow, W. W.	1 Aero.	4 Field House	Reidsville, N. C.
Barton, E. I.	1 Aero.	225 Hawthorne Rd.	Alexandria, Va.
Barton, T. E.	1 Aero.	A 9th, Box 4344	Washington, D. C.
Barton, W. J.	2 For.	214 C, Box 4242	Canton, N. C.
Bason, W. A.	1 E. E.	600 Willard Place	Raleigh, N. C.
Bass, T. J.	1 Ag.	3 9th, Box 4336	Red Oak, N. C.
Bateman, P. H.	2 M. E.	237 C, Box 4262	Rockingham, N. C.
Baucom, T. C.	4 Ag. Ed.	24 South, Box 3620	Polkton, N. C.
Bazemore, J. W.	2 M. E.	224 A, Box 4153	Mt. Olive, N. C.
Beam, F. M.	4 C. E.	2310 Hillsboro St.	Ellenboro, N. C.
Beam, H. E.	1 Ag.	103 5th, Box 3203	Fallston, N. C.
Beam, J. L., Jr.	4 Arch. E.	320 South, Box 3584	Cherryville, N. C.
Beam, J. W.	1 Ag.	Withdrew	Crouse, N. C.
Beaman, A. L., Jr.	4 E. E.	111 6th, Box 3247	Snow Hill, N. C.
Beasley, J. K.	2 Ch. E.	207 A, Box 4138	Louisburg, N. C.
Beasley, J. M.	4 Ind. A.	305 Wat., Box 3041	Louisburg, N. C.
Beatty, C. G.	1 Cer.	308 6th, Box 3268	Albemarle, N. C.
Beaver, W. E., Jr.	4 Tex.	239 C, Box 4264	Salisbury, N. C.
Beddingfield, L. L., Jr.	1 C. E.	304 7th, Box 3370	Hickory, N. C.
Beeghly, R. E.	2 Cer.	328 A, Box 4191	Asheville, N. C.
Beeman, C. K.	4 Ag.	124½ Hillcrest Rd.	Raleigh, N. C.
Beeman, R. C.	2 Ag.	124½ Hillcrest Rd.	Raleigh, N. C.
Belch, C. N.	1 E. E.	108 10th, Box 4408	Colerain, N. C.
Bell, F. B.	2 Aero.	8 Ferndell Lane	Winston-Salem, N. C.
Bell, H. P.	2 Ag.	115 A, Box 4112	Huntersville, N. C.
Bell, J. A.	4 Ind. A.	307 Wat., Box 3043	Newport, N. C.
Benbenek, Raymond	2 Cer.	103 South, Box 3503	Jamestown, N. Y.
Bennett, B. E.	1 C. E.	125 Woodburn Rd.	Rocky Mount, N. C.
Bennett, M. W.	2 M. E.	Withdrew	Raleigh, N. C.
Benthall, T. J.	2 C. E.	1715 Park Dr.	Ahoskie, N. C.
Benton, A. J.	5 F. C.	114 Horne St.	Port Arthur, Tex.
Benton, W. T.	3 Ch. E.	1720 Hillsboro St.	Wilmington, N. C.
Berger, C. E.	2 Ag.	223 A, Box 4152	Brooklyn, N. Y.
Berger, W. L.	2 Aero.	205 A, Box 4137	Winston-Salem, N. C.
Berkelheimer, Irwin	2 Tex.	106 Horne St.	New York, N. Y.
Berkut, M. K.	5 Ag. Ch.	Route 4	Raleigh, N. C.
Berman, S. M.	2 Tex.	2304 Clark Ave.	Baltimore, Md.
Berry, J. D.	1 Engr.	230 E. Morgan St.	Raleigh, N. C.
Berry, W. J.	1 Ag.	1104 Glenwood Ave.	Raleigh, N. C.
Berryhill, E. C.	2 Ag.	8 Ferndell Lane	Charlotte, N. C.
Berryhill, W. W.	2 M. E.	331 South, Box 3595	Charlotte, N. C.
Bess, D. H.	2 Ag.	309 5th, Box 3233	Statesville, N. C.
Bess, W. K.	1 E. E.	16 8th, Box 3818	Statesville, N. C.
Betts, B. S.	2 Engr.	1814 Park Dr.	Raleigh, N. C.
Betts, J. K.	3 Ch. E.	310 6th, Box 3270	Woodbury, N. J.
Betty, L. I., Jr.	2 Tex.	117 South, Box 3517	Raleigh, N. C.
Bickerstaff, R. B.	4 Cer.	1301 Hillsboro St.	Columbus, Ga.
Bivens, R. W.	2 E. E.	34 Shepherd St.	Wingate, N. C.
Bivens, T. E.	3 Ind. A.	313 South, Box 3577	Hillsboro, N. C.
Blackmon, B. B.	3 Ag.	2220 Hillsboro St.	Buie's Creek, N. C.
Blackman, Herman	1 Occu. Inf.	116½ Groveland Ave.	Rocky Mount, N. C.
Blackwelder, A. L.	4 Tex.	102 South, Box 3502	Hickory, N. C.
Blake, C. J.	1 Aero.	133 A, Box 4127	Greensboro, N. C.
Blalock, J. E.	3 Aero.	232 South, Box 3564	Stem, N. C.
Blalock, T. C.	1 Ag.	201 9th, Box 4308	Black Creek, N. C.

Name	*Classification*	*School Address*	*Home Address*
Bland, H. S.	1 Ag.	326 7th, Box 3392	Willard, N. C.
Bland, W. A.	4 For.	215 Park Ave.	Boydton, Va.
Bland, W. M., Jr.	2 Aero.	128 C, Box 4225	Fayetteville, N. C.
Blevins, G. N.	1 Ag. Ed.	101 South, Box 3501	Bakersville, N. C.
Bloom, Theodore	2 E. E.	301 C, Box 4266	Bridgeport, Conn.
Blow, J. G.	4 M. E.	2407 Clark Ave.	Vanceboro, N. C.
Blow, W. L.	1 C. E.	13 8th, Box 3815	New Bern, N. C.
Blue, J. E.	1 Aero.	228 7th, Box 3360	Laurinburg, N. C.
Blue, J. F.	4 Tex.	105 Wat., Box 3005	Carthage, N. C.
Blue, W. H.	4 E. E.	112 Wat., Box 3012	Carthage, N. C.
Blum, N. D.	2 Ag.	303 C, Box 4268	Newark, N. J.
Bobbitt, H. L.	1 Aero.	223 8th, Box 3757	Norlina, N. C.
Bobbitt, R. M.	2 Ag.	612 Rosemont Ave.	Littleton, N. C.
Bodner, H. L.	2 M. E.	221 C, Box 4249	Philadelphia, Pa.
Boger, J. P.	1 Ch. E.	201 8th, Box 3735	Concord, N. C.
Bollin, C. R.	2 Tex.	319 C, Box 4281	Mayodan, N. C.
Boltrek, Peter, Jr.	2 Aero.	212 Wat., Box 3030	Arverne, N. Y.
Bonds, L. C.	1 M. E.	202 C, Box 4233	Concord, N. C.
Boney, W. J.	2 Arch E.	103 Chamberlain St.	Wilmington, N. C.
Booker, A. E. D.	1 Tex.	214 8th, Box 3748	Halifax, Va.
Booker, J. H.	1 Tex.	8 Field House	Colon, N. C.
Boone, J. B.	3 Ag.	8 Ferndell Lane	Clinton, N. C.
Boone, J. D.	2 Ch. E.	329 A, Box 4192	Pendleton, N. C.
Boone, R. H.	4 Geol.	102 4th, Box 3112	Spruce Pine, N. C.
Bordeaux, J. H., Jr.	1 Ag.	210 South, Box 3542	Burgaw, N. C.
Boseman, J. D.	1 M. E.	Dairy Barn, Box 5127	Rocky Mount, N. C.
Bost, C. M.	4 Ag.	4 Maiden Lane	Rockwell, N. C.
Bost, J. E.	1 Aero.	307 7th, Box 3373	Eagle Springs, N. C.
Bostick, J. K.	2 Aero.	411 Dixie Trail	Raleigh, N. C.
Bowden, S. R., Jr.	1 Tex.	14 8th, Box 3816	Warsaw, N. C.
Bowen, E. R.	3 Ch. E.	5245 Boylan Ave	Charlotte, N. C.
Bowen, R. P.	1 C. E.	310 5th, Box 3234	Burgaw, N. C.
Bower, J. H.	4 Aero.	2316 Hillsboro St.	Lexington, N. C.
Bowers, F. J.	4 Ag.	113 South, Box 3513	Jackson, N. C.
Bowles, J. P.	2 Ag.	11 South, Box 3607	Hiddenite, N. C.
Bowman, A. P.	1 E. E.	2 8th, Box 3804	Hickory, N. C.
Bowman, H. L.	4 Ch. E.	110 Wat., Box 3010	Hickory, N. C.
Boyce, R. D.	3 Ag.	109 10th, Box 4409	Woodland, N. C.
Boyd, E. W.	1 Tex.	214 7th, Box 3346	Lynchburg, Va.
Boyd, H. J.	1 Aero.	Y. M. C. A.	Pinetown, N. C.
Boyd, R. B., Jr.	2 Engr.	21 Enterprise St.	Durham, N. C.
Boyer, C. D., Jr.	2 Ch. E.	208 5th, Box 3220	Arlington, Va.
Boyer, F. S.	2 M. E.	235 A, Box 4162	Rocky Mount, N. C.
Boyer, W. W.	1 C. E.	324 7th, Box 3390	Arlington, Va.
Boyette, C. R.	1 Tex.	10 Enterprise St.	Goldsboro, N. C.
Boyette, R. A.	4 I. E.	116½ Oberlin Rd.	Kenley, N. C.
Boyette, R. C.	1 For.	9 9th, Box 4342	Goldsboro, N. C.
Boykin, T. D.	1 Ag.	213 8th, Box 3747	Bailey, N. C.
Boylan, W. M.	3 Aero.	1301 Hillsboro St.	New Bern, N. C.
Bradford, T. M.	1 Aero.	312 5th, Box 3236	Winston-Salem, N. C.
Bradshaw, D. H., Jr.	4 Aero.	17 Enterprise St.	Norfolk, Va.
Brady, D. W.	4 Ag.	16 South, Box 3612	Carthage, N. C.
Brady, N. C.	5 Soils	2112 Country Club Dr.	Raleigh, N. C.
Brady, V. D.	1 Ag.	Withdrew	Randleman, N. C.
Bragg, M. E.	1 Ch. E.	304 7th, Box 3370	Franklinton, N. C.
Brake, D. P.	1 C. E.	231 8th, Box 3765	Rocky Mount, N. C.
Brake, R. R.	2 Ag.	337 A, 4197	Battleboro, N. C.
Brame, C. B.	3 M. E.	301 6th, Box 3261	Lucama, N. C.
Brandt, G.	4 Tex.	21 Enterprise St.	Greensboro, N. C.
Branscome, J. R.	4 C. E.	116 Wat., Box 3016	Galax, Va.
Bratton, John, Jr.	2 C. E.	1530 Carr St.	Raleigh, N. C.

Name	*Classification*	*School Address*	*Home Address*
Brawley, T. A.	3 Ag.	4 Maiden Lane	Mooresville, N. C.
Breithaupt, C. C.	5 Ind. Ed.	612 Dixie Trail	Raleigh, N. C.
Breslow, Herbert	1 For.	8 Field House	Brooklyn, N. Y.
Breuer, E. P.	2 I. E.	105 5th, Box 3205	Greensboro, N. C.
Brewer, W. P.	4 Ch. E.	104 Wat., Box 3004	Greensboro, N. C.
Brickhouse, R. E., Jr.	2 Cer.	105 A, Box 4105	Warrenton, N. C.
Bridge, M. P.	5 Ag. Ed.	3107 Hillsboro St.	Raleigh, N. C.
Bridges, R. H.	1 M. E.	125 Chamberlain St.	Raleigh, N. C.
Bridgman, M. T.	1 Aero.	126 7th, Box 3326	Columbia, N. C.
Briggs, E. L., Jr.	2 M. E.	311 C, Box 4273	High Point, N. C.
Briggs, J. E.	5 Ag. An. Prod.	322 Cutler St.	Winfield, Iowa
Briggs, T. L., Jr.	3 M. E.	8 Ferndel Lane	Raleigh, N. C.
Brinkley, J. W.	3 Tex.	219 C, Box 4247	Valdese, N. C.
Brinson, L. T., Jr.	2 M. E.	220 South, Box 3552	Arapahoe, N. C.
Bristol, H. H., Jr.	1 M. E.	202 7th, Box 3334	East Orange, N. J.
Britt, B. E.	2 Ag.	Route 1	Garner, N. C.
Broadway, J. F., Jr.	1 Ag.	331 7th, Box 3397	Salisbury, N. C.
Brooks, W. J.	1 C. E.	21 Enterprise St.	Red Springs, N. C.
Brose, K. R.	1 M. E.	107 10th, Box 4407	New York, N. Y.
Brotman, Arnold	2 Tex.	323 A, Box 4186	Newark, N. J.
Browder, H. M.	1 C. E.	124 8th, Box 3724	Weldon, N. C.
Brower, E. W.	1 Ag.	326 7th, Box 3392	Ivanhoe, N. C.
Brown, C. D.	1 Ag.	Brooks Ave., Box 5441	Charlotte, N. C.
Brown, C. E.	1 M. E.	321 7th, Box 3387	Belcross, N. C.
Brown, F. H., Jr.	Grad. Soils	6 Enterprise St.	Cullowhee, N. C.
Brown, F. W.	1 Ag.	2306 Hillsboro St.	Greenville, N. C.
Brown, H. C.	5 Entom.	2100 Hillsboro St.	Raleigh, N. C.
Brown, H. E.	3 Ch. E.	305 6th, Box 3265	Asheboro, N. C.
Brown, John, Jr.	1 For.	318 8th, Box 3786	Whiteville, N. C.
Brown, J. E.	1 Cer.	2 8th, Box 3804	Snow Hill, N. C.
Brown, J. J.	2 Cer.	107 A, Box 4107	Mount Airy, N. C.
Brown, J. O.	1 Ch. E.	305 C, Box 4270	Salisbury, N. C.
Brown, J. T.	4 Ch. E.	120½ Groveland Ave.	Roanoke Rapids, N. C.
Brown, L. W.	2 Tex.	10 Enterprise St.	Chadbourn, N. C.
Brown, P. J., Jr.	5 Ag. An. Prod.	302 4th, Box 3128	Charlotte, N. C.
Brown, R. O.	2 Ag.	Brooks Ave., Box 5441	Charlotte, N. C.
Brown, T. L.	5 Soils	114 Horne St.	Little Rock, Ark.
Brown, T. M.	1 Ch. E.	10 9th, Box 4343	Asheville, N. C.
Brown, W. Albert, Jr.	4 I. E.	2407 Clark Ave.	Wilmington, N. C.
Brown, W. Ashby	3 Aero.	205 Wat., Box 3023	Elizabeth City, N. C.
Brown, W. C.	1 Ag. Ed.	208 7th, Box 3340	Williamston, N. C.
Brown, W. H.	1 E. E.	230 7th, Box 3362	Goldsboro, N. C.
Brown, W. T.	1 Tex.	136 Woodburn Rd.	Charlotte, N. C.
Brownold, M. J.	1 Tex.	314 8th, Box 3782	Red Bank, N. J.
Brownstein, Edward	4 Ag.	2304 Clark Ave.	New Haven, Conn.
Bruner, J. P.	1 Aero.	310 9th, Box 4330	Salisbury, N. C.
Brunschwyler, J. P.	2 I. E.	2306 Hillsboro St.	Hemphill, W. Va.
Bruton, F. A.	2 C. E.		Mt. Gilead, N. C.
Bruton, W. J.	1 E. E.	305 4th, Box 3131	Jackson Springs, N. C.
Bryan, D. L.	4 Ch. E.	125 Woodburn Rd.	Wilson, N. C.
Bryan, W. P.	4 Ch. E.	1550 Iredell Dr.	Marshall, N. C.
Bryant, E. L.	4 Ch. E.	325 7th, Box 3391	Wilmington, N. C.
Bryant, J. F.	2 E. E.	1911 Alexander Rd.	Raleigh, N. C.
Bryant, O. K.	1 Aero.	312 9th, Box 4332	Franklin, N. C.
Bryant, S. N.	1 Arch E.	126 8th, Box 3726	Greensboro, N. C.
Bryant, W. E.	4 I. E.	206 9th, Box 4313	Wilmington, N. C.
Bryson, H. B.	2 Ch. E.	8 Ferndell Lane	Hendersonville, N. C.
Buchanan, S. W.	1 Arch. E.	Western Blvd., R. 4	Raleigh, N. C.
Buckner, H. G.	2 For.	116½ Groveland Ave.	Asheville, N. C.
Buffaloe, H. L.	3 M. E.	302 A, Box 4168	Garner, N. C.
Buffaloe, J. H.	1 Tex.	605 E. Lane St.	Raleigh, N. C.

Name	*Classification*	*School Address*	*Home Address*
Buice, J. L.	2 Tex.	.....	Charlotte, N. C.
Bullard, P. D.	3 Aero.	2302 Clark Ave.	Wilson, N. C.
Bumgardner, E. E.	1 M. E.	101 10th, Box 4401	Winston-Salem, N. C.
Bundy, T. B.	1 Aero.	Field House	Enka, N. C.
Bunn, J. C.	5 Engr.	16 Enterprise	Spring Hope, N. C.
Bunn, J. E.	2 M. E.	215 Wat., Box 3033	Rockingham, N. C.
Bunn, M. S.	1 Ag.	223 A, Box 4152	Spring Hope, N. C.
Burch, J. P.	2 Ag.	103 Wat., Box 3003	Mountain Park, N. C.
Burdette, Margaret R.	5 Occ. Inf.	2729 Cambridge Rd.	Raleigh, N. C.
Burgess, Elva	5 Occ. Inf.	204 Park Ave.	Raleigh, N. C.
Burgess, J. F.	4 Ch. E.	50 1911	Pleasant Garden, N. C.
Burgiss, W. E.	1 Arch. E.	226 7th, Box 3358	Elkin, N. C.
Burke, R. A.	1 Tex.	212 10th, Box 4421	Charlotte, N. C.
Burke, T. D.	3 Occ. Inf.	118 N. Dawson St.	Raleigh, N. C.
Burkett, T. E.	1 Tex.	320 A, Box 4183	Jefferson, N. C.
Burns, H. D.	1 Ag.	109 6th, Box 3245	Fairmont, N. C.
Burrows, W. L.	2 Ch. E.	213 A, Box 4142	Charlotte, N. C.
Burrus, J. T., Jr.	1 Aero.	207 5th, Box 3219	Belhaven, N. C.
Burtner, R. L., Jr.	1 M. E.	10 Field House	Washington, D. C.
Burton, D. R.	1 Ch. E.	116 Groveland Ave.	Mebane, N. C.
Burton, L. C., Jr.	1 Aero.	210 10th, Box 4419	Edenton, N. C.
Burts, T. E., Jr.	2 Ch. E.	315 A, Box 4178	Charlotte, N. C.
Bushee, W. H., Jr.	2 Tex.	1720 Hillsboro St.	Mt. Holly, N. C.
Butler, J. M.	1 Ag.	303 8th, Box 3771	Rowland, N. C.
Byrd, H. A.	2 Ag.	213 South, Box 3545	Burlington, N. C.
Byrd, R. H.	2 Ag.	117 Wat., Box 3017	Bunnlevel, N. C.
Cabe, H. W., Jr.	2 Aero.	107 C, Box 4205	Franklin, N. C.
Cabe, K. R.	3 I. E.	6 Ferndell Lane	Franklin, N. C.
Cain, E. P., Jr.	2 Ch. E.	320 New Bern Ave.	Raleigh, N. C.
Caldwell, K. E., Jr.	1 Ch. E.	303 8th, Box 4771	Concord, N. C.
Caldwell, L. E.	4 Ch. E.	313 Wat., Box 3049	Campobello, S. C.
Caldwell, T. P.	4 Tex.	313 Wat., Box 3049	Charlotte, N. C.
Calfee, J. F.	4 E. E.	301 Wat., Box 3037	Belhaven, N. C.
Calhoun, L. G., Jr.	3 Ag.	211 C, Box 4239	Rocky Mount, N. C.
Callaway, R. F.	2 Tex.	109 A, Box 4107	Henderson, N. C.
Calman, C. M.	2 Ag.	2304 Clark Ave.	New York, N. Y.
Cameron, H. C.	4 Engr.	103 Wat., Box 3003	Oxford, N. C.
Cameron, H. L.	3 Ag.	12 South, Box 3608	Vass, N. C.
Cameron, L. J., Jr.	1 Ag.	314 7th, Box 3380	Kinston, N. C.
Cammer, E. C.	1 Aero.	106 9th, Box 4306	Wilson, N. C.
Camp, B. G.	4 E. E.	202 South, Box 3534	Ahoskie, N. C.
Campbell, B. W.	2 Ag.	618 Hillsboro St.	Union Grove, N. C.
Campbell, J. F.	4 E. E.	19 South, Box 3615	Wagram, N. C.
Campbell, J. R.	1 E. E.	218 7th, Box 3350	Burlington, N. C.
Campbell, P. O.	1 M. E.	417 Cutler St.	Raleigh, N. C.
Campbell, W. E.	2 Arch.	3107 Hillsboro St.	Wethersfield, Conn.
Campbell, W. S.	3 For.	318 A, Box 4181	Staunton, Va.
Cannady, N. E., Jr.	4 E. E.	16 Horne St.	Oxford, N. C.
Cannon, L. H.	2 Ag.	1720 Hillsboro St.	New Bern, N. C.
Capeheart, A. A., Jr.	4 Aero.	207 C, Box 4237	Washington, N. C.
Capel, G. L.	2 Ag.	231 South, Box 3563	Garysburg, N. C.
Carey, J. P.	4 Arch. E.	2405 Clark Ave.	Kinston, N. C.
Carnes, R. W.	1 Ch. E.	318 8th, Box 3786	Whiteville, N. C.
Carney, J. F.	4 C. E.	111 7th, Box 3311	Emporia, Va.
Carpenter, R. F.	1 Ag.	Withdrew	Newport News, Va.
Carpenter, T. B.	1 M. E.	316 8th, Box 3784	Greensboro, N. C.
Carr, E. G.	1 E. E.	209 7th, Box 3341	Goldsboro, N. C.
Carr, J. S., Jr.	1 E. E.	209 7th, Box 3341	Goldsboro, N. C.
Carr, W. R.	1 E. E.	Withdrew	Goldsboro, N. C.
Carrell, E. W.	1 Tex.	103 Chamberlain St.	Wilmington, N. C.
Carroll, J. W.	1 Aero.	Route 1	Zebulon, N. C.

Name	*Classification*	*School Address*	*Home Address*
Carroll, S. E., Jr.	4 Ch. E.	Box 772	Raleigh, N. C.
Carson, C. O.	2 E. E.	409 Oakwood Ave.	Rocky Mount, N. C.
Carter, F. T.	1 Aero.	312 7th, Box 3378	Powellsville, N. C.
Carter, J. A.	1 E. E.	209 6th, Box 3257	Salisbury, N. C.
Carter, W. E.	4 I. E.	306 Wat., Box 3038	Raleigh, N. C.
Cartner, Sam	2 Ag.	312 7th, Box 3378	Mocksville, N. C.
Carty, E. L.	2 E. E.	325 South, Box 3589	Selma, N. C.
Carvalho, Raul	2 Ch. E.	Gymnasium	Swannanoa, N. C.
Carver, I. L.	3 Ag.	112 Cox Ave.	Durham, N. C.
Carver, W. R.	1 C. E.	317 7th, Box 3383	Elizabeth City, N. C.
Carvin, C. W., Jr.	1 Tex.	109 7th, Box 3309	Scarsdale, N. Y.
Case, C. B., Jr.	1 M. E.	327 8th, Box 3795	Wilmington, N. C.
Case, C. E.	4 I. E.	207 South, Box 3539	Fountain, N. C.
Casey, C. W.	1 Aero.	208 9th, Box 4315	Rocky Point, N. C.
Casey, J. F.	1 Ag.	230 7th, Box 3361	Goldsboro, N. C.
Cashion, H. C.	1 Aero.	6 8th, Box 3808	Lincolnton, N. C.
Cathey, R. H.	4 Tex.	214 Wat. Box 3032	Charlotte, N. C.
Caton, J. C.	3 Tex.	311 7th, Box 3377	Concord, N. C.
Cauble, M. W., Jr.	3 M. E.	1710 Park Dr.	Winston-Salem, N. C.
Caudill, T. L.	1 Engr.	215 8th, Box 3749	N. Wilkesboro, N. C.
Caudle, L. F.	1 C. E.	708 E. Hargett St.	Raleigh, N. C.
Cazel, H. A.	1 I. E.	123 8th, Box 3723	Asheville, N. C.
Cease, C. B., Jr.	1 Ch. E.	134 8th, Box 3734	Greensboro, N. C.
Chadwick, D. G.	5 Voc. G.	1806 Hillsboro St.	Straits, N. C.
Chambers, J. W.	3 E. E.	1408 Hillsboro St.	Asheville, N. C.
Chamblee, D. S.	3 Ag. Ed.	2202 Hillsboro St.	Zebulon, N. C.
Champion, P. L.	3 Tex.	4 E. Dixie Dr.	Spindale, N. C.
Chandler, J. M.	1 Ch. E.	20 8th, Box 3821	Salisbury, N. C.
Chandler, W. S.	2 Ag. Ed.	2316 Hillsboro St.	Rockingham, N. C.
Changaris, T. C.	2 M. E.	105 A, Box 4105	Durham, N. C.
Chapman, R. C., Jr.	1 C. E.	211 7th, Box 3343	Morganton, N. C.
Chapman, W. M.	2 Ch. E.	213 Woodburn Rd.	Charlotte, N. C.
Chappell, A. C.	1 M. E.	Field House	Beaufort, N. C.
Chatham, R. A.	1 I. E.	216 7th, Box 3348	Elkin, N. C.
Cherkas, W. M., Jr.	1 Aero.	101 7th, Box 3301	Oxford, N. C.
Chesnutt, H. F.	2 Ch. E.	201 6th, Box 3249	Clinton, N. C.
Chesnutt, R. A.	1 E. E.	107 8th, Box 3707	Seven Springs, N. C.
Chesnutt, R. L.	2 E. E.	2008 Hillsboro St.	Snow Hill, N. C.
Chestnutt, D. D.	1 Tex.	127 8th, Box 3727	Roanoke Rapids, N. C.
Childress, S. H.	1 M. E.	A1 10th, Box 4422	Hallsboro, N. C.
Chisholm, E. M.	1 C. E.	330 A, Box 4193	Frederick Hall, Va.
Church, J. R.	3 Ag.	6 South, Box 3602	North Wilkesboro, N. C.
Clapp, H. P.	2 C. E.	125 South, Box 3525	Greensboro, N. C.
Clark, Billy	1 For.	12 8th, Box 3814	Clarkton, N. C.
Clark, Foy	2 Tex.	116 C, Box 4213	Mt. Airy, N. C.
Clark, K. W.	2 M. E.	8½ Maiden Lane	Lenoir City, Tenn.
Clark, T. J.	1 Tex.	2306 Hillsboro St.	Charlotte, N. C.
Clark, W. B., Jr.	1 C. E.	129 7th, Box 3329	Wilson, N. C.
Clark, W. H.	1 M. E.	8 Ferndell Lane	Hope Mills, N. C.
Clark, W. M.	1 Ch. E.	102 9th, Box 4302	Lexington, N. C.
Clay, M. J.	4 Ag.	225 7th, Box 3357	Hester, N. C.
Clee, D. B.	1 For.	1313 Hillsboro St.	Asheville, N. C.
Clee, G. P.	3 M. E.	Power Plant, Box 5241	Raleigh, N. C.
Clement, H. M.	2 Tex.	113 C, Box 4210	Goldsboro, N. C.
Cline, J. C.	1 Ag.	316 A	Shelby, N. C.
Coates, J. B.	1 Ag.	19 8th, Box 3820	Smithfield, N. C.
Cobb, H. H.	3 Ag.	207 4th, Box 3125	Wadesboro, N. C.
Cobb, J. D., Jr.	2 Ag.	240 A, Box 4166	Lumber Bridge, N. C.
Cobb, J. R.	1 Ag.	Dairy	Rocky Mount, N. C.
Coble, C. B., Jr.	2 Ag.	115 A, Box 4112	Burlington, N. C.
Coble, E. F.	3 Tex.	204 C, Box 4234	Winston-Salem, N. C.

Name	*Classification*	*School Address*	*Home Address*
Coble, G. R.	4 Ag.	209 South, Box 3541	Greensboro, N. C.
Coble, G. W.	1 E. E.	208 8th, Box 3742	Burlington, N. C.
Cochran, R. B., Jr.	1 M. E.	A 9th, Box 4344	Charlotte, N. C.
Cockerham, C. C.	3 Ag.	107 4th, Box 3113	Mountain Park, N. C.
Cody, S. J.	1 M. E.	321 7th, Box 3387	Canton, N. C.
Coggin, R. J.	2 Ag.	1720 Hillsboro St.	Albemarle, N. C.
Cohen, Bertram	1 For.	105 7th, Box 3305	New York, N. Y.
Cohen, M. F.	4 Ch. E.	226 C, Box 4254	Waltham, Mass.
Cole, E. H.	1 Tex.	202 9th, Box 4309	Cincinnati, Ohio
Cole, E. R.	1 Ch. E.	225 8th, Box 3759	Phoebus, Va.
Cole, R. D.	2 Ag.	324 South, Box 3588	Forest City, N. C.
Coleman, R. F., Jr.	5 C. E.	20 Logan Court	Wilmington, N. C.
Coleman, R. W.	2 Aero.	8 South, Box 3604	Asheville, N. C.
Colenda, Frank	4 Ch. E.	303 Wat., Box 3039	Morehead City, N. C.
Collier, J. C.	1 Aero.	905 Wilmington Terrace	Raleigh, N. C.
Collier, R. W.	4 Ch. E.	228 South, Box 3560	Fayetteville, N. C.
Collier, V. L.	1 Ag.	107 C, Box 4205	Severn, N. C.
Collins, E. C.	5 R. S.		Hartford, Conn.
Collins, I. K.	1 Aero.	330 7th, Box 3396	Raleigh, N. C.
Collins, P. E.	3 M. E.	205 6th, Box 3253	Newport News, Va.
Colson, Gardner	2 Tex.	1301 Hillsboro St.	Montclair, N. J.
Coltrane, A. L.	1 Ag.	204 7th, Box 3336	Kernersville, N. C.
Comlis, W. T., Jr.	1 Engr.	128 8th, Box 3728	Leaksville, N. C.
Connelly, F. G.	1 Tex.	321 8th, Box 3789	Lock Haven, Pa.
Connelly, Patricia E.	1 Ag.	228 Furches Place	Raleigh, N. C.
Conrad, A. B.	3 Tex.	103 Chamberlain St.	Charlotte, N. C.
Conrad, A. F.	1 Arch. E.	131 8th, Box 3731	Lexington, N. C.
Conrad, G. W.	3 Ag.	111 5th, Box 3211	Lexington, N. C.
Constant, L. A.	4 Aero.	116 South, Box 3516	Grafton, Mass.
Conyers, F. R., Jr.	2 E. E.	309 C, Box 4272	Rocky Mount, N. C.
Cook, B. L.	4 For.	215 Park Ave.	Kinston, N. C.
Cook, I. M., Jr.	2 M. E.	16 Horne St.	Charlotte, N. C.
Cook, J. I., Jr.	1 Arch. E.	1814 Park Dr.	Black Mountain, N. C.
Cooley, J. A.	1 Ag.	308 7th, Box 3374	Wagram, N. C.
Cooper, A. G., Jr.	1 Ag.	2220 Hillsboro St.	Godwin, N. C.
Cooper, A. S., Jr.	3 Aero.	1209 Cowper Dr.	Raleigh, N. C.
Cooper, C. O., Jr.	1 Ch. E.	Gym., Box 5162	Saluda, N. C.
Cooper, Kendall	1 Aero.	330 8th, Box 3798	Nashville, N. C.
Cooper, W. G.	4 E. E.	50 1911, Box 5252	Climax, N. C.
Coor, E. O., Jr.	2 Ag.	123½ Chamberlain St.	Selma, N. C.
Copeland, E. W.	1 Tex.	203 A, Box 4531	Palmyra, N. C.
Corbin, W. L.	3 C. E.	125 7th, Box 3325	Otto, N. C.
Cornwell, R. S.	3 Aero.	312 A, Box 4175	Nashville, N. C.
Cornwell, T. S., Jr.	3 Ag.	2004 Hillsboro St., Box 5565	Shelby, N. C.
Cotton, B. Y.	1 Ch. E.	328 8th, Box 3796	Poplar Branch, N. C.
Council, Jerome Mitchell	1 Ag.	7 Field House	Council, N. C.
Council, John Monroe, Jr.	2 E. E.	230 C, Box 4258	Wananish, N. C.
Cousart, E. K.	2 M. E.	312 6th, Box 3272	Charlotte, N. C.
Covington, F. E., Jr.	4 I. E.	312 Wat., Box 3048	Wadesboro, N. C.
Covington, H. W., Jr.	1 For.	309 A, Box 4173	Charlotte, N. C.
Covington, M. C.	3 Ag.	2408 Everett Ave.	Jonesburg, N. C.
Coward, E. G.	4 Tex.	1720 Hillsboro St.	Ayden, N. C.
Cox, A. D., Jr.	1 Ag.	322 C, Box 4284	Castle Hayne, N. C.
Cox, E. D.	2 Cer.	121 South, Box 3521	Charlotte, N. C.
Cox, G. C., Jr.	4 Ch. E.	4 Ferndell Lane	Greensboro, N. C.
Cox, J. F., Jr.	1 Aero.	311 S. Dawson St.	Raleigh, N. C.
Cox, J. L.	1 C. E.	2512 Clark Ave.	Baldwin, New York
Cox, R. G.	1 Aero.	112 A, Box 4109	Greensboro, N. C.
Cox, S. R.	5 Ag.		Kinta, Okla.
Cozart, W. M.	1 Tex.	Withdrew	Edenton, N. C.
Craig, F. R.	3 Ag.	328 South, Box 3592	Mt. Holly, N. C.

Name	*Classification*	*School Address*	*Home Address*
Cramsie, J. R.	1 Tex.	225 8th, Box 3759	Quebec, Canada
Craven, D. A.	3 Aero.	102 Logan Court	Fayetteville, N. C.
Craven, F. N.	1 For.	224 Woodburn Rd.	Pittsburgh, Pa.
Craven, W. M.	2 Ag.	1720 Park Dr.	Raleigh, N. C.
Creasman, E. H., Jr.	2 Cer.	10 Enterprise St.	Seabrook, S. C.
Credle, W. C.	1 Aero.	107 10th, Box 4407	Belhaven, N. C.
Creech, W. S.	1 Ag.	10 Enterprise St.	Smithfield, N. C.
Creech, W. T.	1 Aero.	307 A, Box 4172	Benson, N. C.
Creef, G. H.	2 M. E.	240 A, Box 4166	Manteo, N. C.
Critcher, T. S.	2 Ag.	119 C, Box 4216	Williamston, N. C.
Crocker, J. H.	2 Ag.	124 A, Box 4119	New York, N. Y.
Crocker, William	1 C. E.	1012 Vance St.	Raleigh, N. C.
Crombie, W. A.	4 For.	2720 Bedford Ave.	Delain, N. C.
Crowder, W. H., Jr.	4 Tex.	104 Logan Court	Salisbury, N. C.
Culberson, G. R.	5 Tex.	219 Oberlin Rd.	Raleigh, N. C.
Cullen, A. B., Jr.	1 M. E.	222 7th, Box 3354	Dover, Delaware
Culp, A. E., Jr.	3 Tex.	338 C, Box 4297	Gastonia, N. C.
Culp, J. M., Jr.	1 Tex.	314 South, Mail: 4 Ferndell Lane,	Charlotte, N. C.
Culvern, J. B.	4 Ag.	204 South, Box 3536	Camden, S. C.
Cummings, J. C., Jr.	2 M. E.	2712 Bedford Ave.	High Point, N. C.
Cunningham, F. C.	4 I. E.	1615 Fairview Rd.	Raleigh, N. C.
Currie, D. S.	4 M. E.	305 Wat., Box 3041	Raeford, N. C.
Currie, W. G.	1 M. E.	Withdrew	Raeford, N. C.
Curtis, E. H.	4 Aero.	1806 Hillsboro St.	Greensboro, N. C.
Curtis, J. M.	2 Ag.	112 C, Box 4209	Franklinville, N. C.
Cutting, A. E.	1 Aero.	2820 Bedford Ave.	Salisbury, N. C.
Cyrus, J. H.	2 Ag.	107 Aycock St.	Louisburg, N. C.
Dagenhart, D. E.	1 Tex.	134 7th, Box 3402	Belmont, N. C.
Dailey, H. G.	1 M. E.	105 7th, Box 3305	Bronx, N. Y.
Dailey, V. C.	3 Aero.	211 Wat., Box 3029	Hatteras, N. C.
Dalrymple, R. W.	3 Ag.	222 A, Box 4151	Jonesboro, N. C.
Dalton, A. F.	4 Ag. Ed.	109 5th, Box 3209	Etowah, N. C.
Dalton, R. I., Jr.	3 Tex.	2405 Clark Ave.	Charlotte, N. C.
Dameron, H. W.	3 Ag. Ed.	301 Park Ave.	Bessemer City, N. C.
Dammann, Richard	2 Cer.	3 Gym., Box 5382	Amityville, N. Y.
Darholt, J. O.	2 Aero.	313 A, Box 4176	Charlotte, N. C.
Daughtridge, R. L.	3 Ag.	2004 Hillsboro St.	Rocky Mount, N. C.
Davenport, R. E.	2 Aero.	308 South, Box 3572	Columbia, S. C.
David, W. J.	1 Ag.	213 Glenwood Ave.	Zebulon, N. C.
Davidson, J. H.	2 For.	302 South, Box 3566	Swannanoa, N. C.
Davidson, M. E., Jr.	4 I. E.	409 Calvin Rd.	Raleigh, N. C.
Davis, C. K., Jr.	1 C. E.	307 8th, Box 3775	Wilmington, N. C.
Davis, H. D.	2 Ch. E.	133 C, Box 4228	Marshallberg, N. C.
Davis, H. M.	1 Aero.	116½ Groveland Ave.	Fayetteville, N. C.
Davis, J. D.	2 Aero.	317 C, Box 4239	West Asheville, N. C.
Davis, J. E.	3 Ag.	106 Wat., Box 3006	Waynesville, N. C.
Davis, J. M., Jr.	1 I. E.	203 9th, Box 4310	East Bend, N. C.
Davis, J. P. G.	2 C. E.	304 A, Box 4170	Brooklyn, N. Y.
Davis, L. B.	4 E. E.	304 5th, Box 3228	Shelby, N. C.
Davis, Marquis, Jr.	4 Ag. Ed.	301 South, Box 3565	Verona, N. C.
Dawkins, P. A.	1 Tex.	Withdrew	Fayetteville, N. C.
Dawson, C. G.	1 Ag.	2220 Hillsboro St.	Dunn, N. C.
Dawson, C. S.	3 Tex.	2405 Clark Ave.	Cramerton, N. C.
Dawson, E. B.	2 E. E.	12½ Horne St.	Kinston, N. C.
Dawson, V. W.	3 Tex.	205 4th, Box 3123	
Dayvault, N. E.	2 For.	131 C, Box 4227	Concord, N. C.
Deal, R. J.	1 Ag.	2620 Van Dyke Ave.	Asheville, N. C.
Dean, J. A.	1 Aero.	123 A, Box 4118	Oxford, N. C.
Dean, J. G.	1 C. E.	207 5th, Box 3219	Louisburg, N. C.
Dearstyne, R. H.	1 Ch. E.	2509 Fairview Rd.	Raleigh, N. C.

Name	*Classification*	*School Address*	*Home Address*
Debnam, W. T.	1 Tex.	Zebulon	Zebulon, N. C.
Degen, Ralph	2 Tex.	2304 Clark Ave.	Bronx, N. Y.
Deitz, F. R.	2 E. E.	127 A, Box 4122	Weaverville, N. C.
DeLamar, J. T.	1 Ch. E.	232 8th, Box 3766	Charlotte, N. C.
DeLaney, J. R.	3 Ag.	313 South, Box 3577	Charlotte, N. C.
de la Rama, Jesus, Jr.	3 Tex.	213 Woodburn Rd.	Manila, Philippines
Dellinger, H. E.	1 M. E.	303 7th, Box 3369	Kannapolis, N. C.
DeLoatche, G. B.	4 Ag. Ed.	11 Y. M. C. A.	Conway, N. C.
Demko, A. G.	2 Aero.	8 Ferndell Lane	Princeton, N. J.
Denny, C. R.	1 Ch. E.	217 8th, Box 3751	East Bend, N. C.
Denton, E. C., Jr.	4 E. E.	306 Brooks Ave.	Raleigh, N. C.
Deranek, R. H.	1 For.	11 Field House	Hillside, N. J.
Derby, W. M., Jr.	3 E. E.	621 Brooks Ave.	Raleigh, N. C.
Derlin, H. W. A.	4 M. E.	2513 Clark Ave.	Moorestown, N. J.
De Vidts, P. E.	5 C. E.	308 4th, Box 3134	Santiago, Chile
Dewey, George B.	4 Tex.	209 Park Ave.	Pulaski, Va.
Dickens, S. P.	2 Ch. E.	318 Wat., Box 3054	Enfield, N. C.
Dickens, W. J.	3 Ag. Ed.	102 6th, Box 3238	Varina, N. C.
Dickerson, D. F.	2 Ind. A.	130 South, Box 3530	Greensboro, N. C.
Dickey, Jack	1 Aero.	203 5th, Box 3215	Murphy, N. C.
Dickinson, C. L.	5 Ch. E.	2406 Stafford Ave.	Wilmington, N. C.
Dickinson, W. T.	2 E. E.	8 Ferndel Lane	Wilson, N. C.
Diehl, J. C., Jr.	2 M. E.	325 South, Box 3589	Selma, N. C.
Dietz, J. H., Jr.	1 E. E.	2226 Hillsboro St.	Sylva, N. C.
Dilday, L. M.	2 Ag.	310 5th, Box 3234	Ahoskie, N. C.
Dillon, A. K.	3 Aero.	2004 Hillsboro St.	Elkin, N. C.
Ding, Y. C.	4 Tex.	Box 5543	New York, N. Y.
Dixon, G. B.	4 Ag. Ed.	205 South, Box 3537	Kings Mountain, N. C.
Dixon, H. C.	2 Tex.	406 Bickett Blvd.	Raleigh, N. C.
Dixon, J. W.	1 Aero	221 7th, Box 3353	Snow Hill, N. C.
Dixon, L. B.	3 Ag.	210 6th, Box 3258	Snow Hill, N. C.
Dixon, R. C., Jr.	1 E. E.	307 9th, Box 4327	Laurinburg, N. C.
Doak, R. R.	3 Tex.	120 Woodburn Rd.	Raleigh, N. C.
Dodge, J. D.	4 C. E.	116 Groveland Ave.	Asheville, N. C.
Doggett, J. W.	1 E. E.	106 7th, Box 3306	Washington, D. C.
Doggett, L. W.	1 Ag.	106 7th, Box 3306	Washington, D. C.
Dolin, R. J.	1 Ag.	217 7th, Box 3349	Mt. Vernon, N. Y.
Douglass, C. A., Jr.	1 M. E.	1924 St. Mary's St.	Raleigh, N. C.
Douglass, R. S.	4 For.	209 5th, Box 3221	Hendersonville, N. C.
Drummond, J. F.	3 Ch. E.	204 Wat., Box 3022	Prospect Park, Pa.
Duke, B. T., Jr.	1 Ch. E.	1507 Ambleside Dr.	Jackson, N. C.
Duke, N. G., Jr.	1 For.	222 South, Box 3554	Lawrenceville, Va.
Dulaney, R. B.	4 I. E.	219 C, Box 4247	Ellwood City, Pa.
Duncan, J. A.	2 Ag. Ed.	112 6th, Box 3248	Trinity, N. C.
Duncan, J. M.	1 Aero.	303 9th, Box 4323	Charlotte, N. C.
Duncan, R. F.	3 C. E.	307 South, Box 3571	Dunn, N. C.
Dunham, R. S.	5 Ag. Ed.	Kildaire Rd., Cary	Tar Heel, N. C.
Dunn, E. F.	1 Ag. Ed.	Brooks Ave., Box 5441	Laurinburg, N. C.
Dunn, J. W.	1 Ch. E.	6 8th, Box 3808	Pinetops, N. C.
Dunn, Marjory A.	1 Aero.	513 Daughtridge St.	Asheville, N. C.
Dunn, M. B.	2 M. E.	104 A, Box 4104	Charlotte, N. C.
Durner, G. M.	2 C. E.	115 Woodburn Rd.	Asheville, N. C.
Dysart, C. E.	3 C. E.	306 6th, Box 3266	Marion, N. C.
Eagle, H. K.	2 Tex.	110 C, Box 4207	Salisbury, N. C.
Eaker, B. H.	3 Ag.	132 South, Box 3532	Crouse, N. C.
Early, T. A., Jr.	2 M. E.	J-4 Grosvenor Garden Apts.	Raleigh, N. C.
Edge, M. W.	1 Ag. Ed.	213 Woodburn Rd.	Fayetteville, N. C.
Edgerton, I. W.	3 Ag.	112 5th, Box 3212	Kenley, N. C.
Edkins, R. N.	3 Ch. E.	217 Wat., Box 3035	Chapel Hill, N. C.
Edwards, E. F.	1 For.	10 9th, Box 4343	Morganton, N. C.
Edwards, H. L.	1 Ag.	26 8th, Box 3826	Marshville, N. C.

Name	*Classification*	*School Address*	*Home Address*
Edwards, J. B., Jr.	1 C. E.	208 9th, Box 4315	Wilmington, N. C.
Edwards, J. R.	1 C. E.	319 8th, Box 3787	Wilmington, N. C.
Efland, M. P., Jr.	1 M. E.	302 7th, Box 3334	Efland, N. C.
Ehrlich, L. L.	1 For.	8 Field House	Washington, D. C.
Elbaum, M. M.	1 Tex.	328 A, Box 4328	New York, N. Y.
Eller, W. R.	2 Ag. Ed.	108 6th, Box 3244	Salisbury, N. C.
Ellis, D. E.	5 Ag.	324 Shepherd St.	Raleigh, N. C.
Ellis, P. W.	1 Aero.	322 7th, Box 3398	Wilmington, N. C.
Ellis, R. E.	2 Aero.	331 C, Box 4293	Marion, N. C.
Ellis, R. R.	2 Ch. E.	101 5th, Box 3201	Gasburg, Va.
Ellison, W. T., Jr.	1 E. E.	Field House	Mullins, W. Va.
Elmore, W. F.	1 Ag.	2209½ Hope St.	Dunn, N. C.
Elrod, L. E.	5 Ag.	101 4th, Box 3111	Hickory, N. C.
English, B. L.	2 M. E.	311 A, Box 4174	Cramerton, N. C.
Ennett, A. D., Jr.	4 Aero.	2514 Clark Ave.	Swansboro, N. C.
Eppes, Robertson, Jr.	3 Ch. E.	225 A, Box 4154	Laurinburg, N. C.
Epstein, H. L.	3 For.	302 C, Box 4267	Far Rockaway, N. Y.
Ermalovich, J. O.	1 Tex.	233 A, Box 4161	Mt. Gay, W. Va.
Erol, Demirhan	3 C. E.	115 Woodburn Rd.	Washington, D. C.
Etheridge, J. N.	2 For.	2220 Hillsboro St.	Williamsburg, Va.
Etheridge, Paul, Jr.	1 M. E.	717 Gaston St.	Raleigh, N. C.
Ethridge, J. W.	3 I. E.	103 6th, Box 3239	Goldsboro, N. C.
Evans, J. M.	1 Aero.	219 A, Box 4148	Wilmington, N. C.
Evans, R. M.	5 Soils	106 4th, Box 3116	Independence, La.
Everett, B. B., Jr.	1 Ag.	8 Ferndell Lane	Palmyra, N. C.
Everett, J. A., Jr.	1 Ag. Ed.	326 A, Box 4189	Palmyra, N. C.
Everett, R. O.	2 Ch. E.	318 A, Box 4181	Greenville, N. C.
Everett, W. E., II	1 Ag.	211 10th, Box 4420	Robersonville, N. C.
Ewell, W. K.	1 Ch. E.	312 9th, Box 4332	Portsmouth, Va.
Fagala, O. H.	1 M. E.	314 7th, Box 3380	Durham, N. C.
Faircloth, A. T.	1 Ag.	303 South, Box 3567	Washington, D. C.
Faires, Edwin	2 Aero.	16 Horne St.	Charlotte, N. C.
Faison, W. A., Jr.	2 M. E.	211 South, Box 3543	Chester, Pa.
Fallwell, E. L.	1 Ch. E.	1709 St. Mary's St.	Raleigh, N. C.
Faris, T. B.	4 Arch. E.	Western Blvd.	Raleigh, N. C.
Farlow, J. N.	5 C. E.	222 Woodburn Rd.	Greensboro, N. C.
Farrar, J. A.	1 Tex.	334 7th, Box 3400	Brooklyn, N. Y.
Farthing, E. H. G.	3 Engr.	114 South, Box 3514	Valle Crucis, N. C.
Farthing, P. M.	1 E. E.	108 10th, Box 4408	Newland, N. C.
Feezor, W. L.	5 Ag.	301 4th, Box 3127	Denton, N. C.
Feldman, Irving	1 Ag.	232 7th, Box 3364	Brooklyn, N. Y.
Feldman, D. O.	4 Tex.	2304 Clark Ave.	Baltimore, Md.
Fendt, L. M., Jr.	4 M. E.	216 Wat., Box 3034	Jacksonville, Fla.
Ferebee, H. C., Jr.	4 Ag.	201 6th, Box 3249	Camden, N. C.
Ferebee, S. S., Jr.	3 Ch. E.	114 Wat., Box 3014	Shawboro, N. C.
Ferguson, J. D.	2 Tex.	322 A, Box 4185	Teaneck, N. J.
Ferguson, J. L., Jr.	4 Cer.	2513 Clark Ave.	Gamboa, Canal Zone
Ferree, H. G., Jr.	3 Tex.	203 Wat., Mail: 4 Ferndell	High Point, N. C.
Ferrell, J. R.	3 Ag.	2713 Rosedale Ave.	Durham, N. C.
Fetner, C. J., Jr.	2 Ch. E.	115 A, Box 4112	Hamlet, N. C.
Fick, T. L.	2 Cer.	10 Enterprise St.	Passaic, N. J.
Filreis, Manuel	1 Tex.	107 7th, Box 3307	New York, N. Y.
Finch, E. A.	3 Ag.	305 6th, Box 3265	Bailey, N. C.
Finch, E. B.	3 Ch. E.	1618 Hillsboro St.	Zebulon, N. C.
Finch, J. D.	1 Aero.	209 10th, Box 4418	Oxford, N. C.
Fincher, C. R.	2 Ag.	3206 Clark Ave., Box 5127	Matthews, N. C.
Findlay, H. M., Jr.	1 C. E.	305 8th, Box 3773	Fort Bragg, N. C.
Finley, J. L.	3 Tex.	803 N. Blount St.	Raleigh, N. C.
Finn, D. B.	3 Tex.	311 South, Box 3575	Concord, N. C.
Firshing, D. R.	1 Aero.	4 Field House	Staten Island, N. Y.
Fishbein, Bernard	2 Ag.	2226 Hillsboro St.	Bronx, N. Y.

Name	Classification	School Address	Home Address
Fisher, C. B.	4 E. E.	6 Ferndell Lane	Whittier, N. C.
Fisher, F. J.	2 Ch. E.	320 C, Box 4282	Roanoke Rapids, N. C.
Fisher, I. M., Jr.	2 Tex.	330 C, Box 4292	Oriental, N. C.
Fisher, J. G.	1 Tex.	109 7th, Box 3309	Scarsdale, N. Y.
Fisher, N. B.	4 M. E.	2513 Clark Ave.	Vanceburg, Ky.
Fisher, W. L.	2 M. E.	309 C, Box 4272	Salisbury, N. C.
Fisler, J. F.	2 Ag.	208 South, Box 3540	Ivanhoe, N. C.
Fitchett, C. E., Jr.	1 Ag.	118 C, Box 4215	Dunn, N. C.
Flake, W. H.	2 Ag. Ed.	206 6th, Box 3254	Wadesboro, N. C.
Fleming, C. E.	1 M. E.	118 7th, Box 3318	Cleveland, N. C.
Fleming, E. E.	1 Ag.	110 7th, Box 3310	Manson, N. C.
Fleming, Margaret K.	4 Occ. Inf.	C-301 Boylan Apts.	Raleigh, N. C.
Fleming, W. E.	3 Ag.	101 6th, Box 3237	Fuquay Springs, N. C.
Fleming, W. L.	4 C. E.	101 6th, Box 3237	Fuquay Springs, N. C.
Fleming, W. M.	1 Occ. Inf.	440 Halifax St.	Raleigh, N. C.
Flora, W. C.	1 E. E.	305 9th, Box 4325	Moyock, N. C.
Flowers, J. L.	1 Ag.	2316 Hillsboro St.	Four Oaks, N. C.
Flowers, J. R.	2 Arch. E.	122 C, Box 4196	Lumberton, N. C.
Floyd, A. A.	1 For.	229 7th, Box 3361	Manning, S. C.
Flythe, J. S.	4 E. E.	714 Nash Dr.	Raleigh, N. C.
Folley, J. W.	4 Tex.	240 C, Box 4265	Aberdeen, N. C.
Fondren, J. E.	1 C. E.	310 7th, Box 3376	Greensboro, N. C.
Forrest, H. O.	1 Aero.	131 A, Box 4126	Mt. Airy, N. C.
Foster, A. W.	3 C. E.	31 Shepherd St.	Raleigh, N. C.
Foster, J. M., Jr.	1 Aero.	15 8th, Box 3817	Hendersonville, N. C.
Foster, R. M.	3 M. E.	506 Cutler St.	Raleigh, N. C.
Foushee, J. G.	4 C. E.	308 Wat., Box 3044	Greensboro, N. C.
Foust, W. L.	1 Ag.	207 9th, Box 4314	Charlotte, N. C.
Fowler, A. A., Jr.	1 Tex.	4 Ferndell Lane	Fairmont, N. C.
Fowler, J. E.	1 Tex.	227 8th, Box 3761	Burlington, N. C.
Fowler, P. M.	1 Ag.	338 A, Box 4198	Thomasville, N. C.
Frady, R. G.	3 Ch. E.	207 6th, Box 3255	Sylva, N. C.
Fraley, J. L.	1 Tex.	2306 Hillsboro St.	Cherryville, N. C.
Francis, J. G.	1 Ag.	226 A, Box 4155	Waynesville, N. C.
Franck, J. R.	1 Ag.	2504 Rosedale Ave.	Scotland Neck, N. C.
Frazier, D. R. S., Jr.	1 Aero.	112 C, Box 4209	Shelby, N. C.
Frazier, E. D.	1 M. E.	313 9th, Box 4333	High Point, N. C.
Frazier, H. K.	1 Engr.	306 9th, Box 4326	Liberty, N. C.
Frazier, W. M., Jr.	1 M. E.	322 8th, Box 3790	Lenoir, N. C.
Freed, J. B.	2 M. E.		Winston-Salem, N. C.
Frei, H. W.	4 Tex.	222 Park Ave.	New York, N. Y.
Friday, W. C.	5	107 9th	Dallas, N. C.
Fried, A. L.	2 Tex.	314 A, Box 4177	Great Neck, N. Y.
Frisbie, Kate E.	3 Occ. Inf.	Box 1964	Raleigh, N. C.
Frizzelle, J. B., Jr.	3 Ag.	2405 Clark Ave.	Snow Hill, N. C.
Fry, C. W.	2 Ind. A.	307 South, Box 3571	Raleigh, N. C.
Fryar, H. V.	3 Ag.	7 South, Box 3606	McLeansville, N. C.
Frye, R. E.	2 Ag.	119 C, Box 4216	Carthage, N. C.
Fuchs, David	1 Tex.	102 10th, Box 4402	Kinston, N. C.
Fulghum, J. T.	1 Ch. E.	2405 Clark Ave.	Raleigh, N. C.
Fulk, S. P., Jr.	2 M. E.	2513 Clarke Ave.	Winston-Salem, N. C.
Fuller, A. H., Jr.	4 Ch. E.	2405 Clark Ave.	Gastonia, N. C.
Fuller, B. O.	1 Ch. E.	Withdrew	Louisburg, N. C.
Fuller, G. A., Jr.	1 E. E.	308 8th, Box 3776	Hickory, N. C.
Funderburk, G. W., Jr.	4 Tex.	2405 Clark Ave.	La Grange, Ga.
Funderburk, W. H.	1 E. E.	204 8th, Box 3738	Charlotte, N. C.
Furches, S. L.	1 M. E.	104 10th, Box 4404	Winston-Salem, N. C.
Furr, C. M.	1 Cer.	207 7th, Box 3339	Oakboro, N. C.
Furr, W. L., Jr.	2 C. E.	123 Woodburn Rd.	Concord, N. C.
Futrell, A. W., Jr.	1 M. E.	327 7th, Box 3393	Nashville, N. C.
Futrell, J. M.	1 Ag. Ed.	2211 Hope St.	Greensboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Futrelle, W. L., Jr.	1 Ag.	118 C, Box 4258	Wilmington, N. C.
Gailey, D. G.	1 M. E.	125 Chamberlain St.	New Haven, Conn.
Gaither, D. D.	2 E. E.	109 C, Box 4206	Charlotte, N. C.
Gallos, J. C.	2 Arch.	307 C, Box 4271	Winston-Salem, N. C.
Galloway, J. A.	1 Ch. E.	132 Woodburn Rd.	Jamestown, N. Y.
Gardner, F. B.	2 Tex.	340 A, Box 4199	Hendersonville, N. C.
Gardner, O. M., Jr.	2 Tex.	308 5th, Box 3232	Shelby, N. C.
Garfinkel, Stanley	3 Tex.	2304 Clark Ave.	Flushing, N. Y.
Garner, J. F.	1 Ag.	106 Horne St.	Greensboro, N. C.
Garrison, E. P.	2 Aero.	914 Vance St.	Raleigh, N. C.
Garriss, Margery B.	4 Arch E.	106 Horne St.	Swansboro, N. C.
Garry, M. S.	1 Tex.	219 7th, Box 3351	Kansas City, Mo.
Gates, C. B.	2 C. E.	139 A, Box 4131	Roxboro, N. C.
Gawkowski, Paul	4 For.	6 Ferndell Lane	New York, N. Y.
Gayle, W. W.	2 Tex.	4 Ferndell Lane	Charlotte, N. C.
Geil, J. W., Jr.	3 Tex.	104 Logan Court	Lynbrook, N. Y.
Geluso, F. R.	1 Aero.	121 7th, Box 3321	Brooklyn, N. Y.
Geluso, N. G.	3 Aero.	339 C, Box 4298	Brooklyn, N. Y.
Gentry, T. B.	1 Ag.	217 8th, Box 3751	Red Springs, N. C.
Getsinger, C. F., Jr.	2 Tex.	1301 Hillsboro St.	Chevy Chase, Md.
Gheen, W. P.	1 Tex.	27 8th, Box 3826	Shelby, N. C.
Gibbs, A. H.	2 Tex.	229 C, Box 4257	Enka, N. C.
Gibbs, E. G.	4 Ch. E.	1720 Hillsboro St.	Morehead City, N. C.
Gibbs, J. D.	1 Aero.	107 South, Box 3507	Engelhard, N. C.
Gibbs, M. L.	4 Tex.	103 Chamberlain St.	Bath, N. C.
Gibbs, N. M.	2 Tex.	21 Enterprise St.	New Bern, N. C.
Gibson, A. E.	3 Ch. E.	211 7th, Box 3343	Greenville, N. C.
Gibson, J. A.	1 Ag.	13 8th, Box 3815	Asheville, N. C.
Gibson, P. J.	5 Ag.		Raleigh, N. C.
Gibson, R. V.	2 Tex.	132 South, Box 3532	Detroit, Mich.
Gibson, V. D.	1 Ag.	112 A, Box 4109	Clarkton, N. C.
Gibson, W. J.	2 Ind. A.	137 A, Box 4129	Gastonia, N. C.
Gilbert, C. R.	2 I. E.	2304 Clark Ave.	Allston, Mass.
Gilbert, R. H.	1 Ag.	Eton Rd.	Raleigh, N. C.
Gilbert, W. L., Jr.	3 E. E.	120½ Oberlin Rd., Box 5501,	Statesville, N. C.
Gill, J. A.	1 Ag.	324 C, Box 4286	Hurley, N. Y.
Gillen, J. J., Jr.	1 C. E.	134 C, Box 4229	Brooklyn, N. Y.
Gilliam, C. L.	2 Tex.	2405 Clark Ave.	Franklinton, N. C.
Gillis, Angus, Jr.	1 M. E.	319 A, Box 4182	Charleston, W. Va.
Gilmore, C. M., Jr.	1 Ag.	203 10th, Box 4412	Greensboro, N. C.
Gilmore, Henry, Jr.	2 E. E.	219 A, Box 4148	Fairhaven, Mass.
Ginnings, P. R.	2 Ch. E.	2514 Clark Ave.	Greensboro, N. C.
Givan, D. D.	1 M. E.	327 South, Box 3591	Charlotte, N. C.
Glazener, E. W.	2 Ag.	340 C, Box 4298	Brevard, N. C.
Glenn, E. C.	1 Ag.	315 7th, Box 3381	Westfield, N. J.
Glover, J. L.	1 E. E.	207 10th, Box 4416	Wilson, N. C.
Gluck, R. L.	2 M. E.	323 A, Box 4186	Morristown, Tenn.
Godwin, C. H.	1 For.	7 9th, Box 4340	Tillman, S. C.
Godwin, J. L.	1 For.	7 9th, Box 4340	Tillman, S. C.
Godwin, J. W.	2 Arch. E.	103 Chamberlain St.	Wilmington, N. C.
Godwin, O. W., Jr.	1 Arch. E.	21 8th, Box 3822	Dunn, N. C.
Goforth, G. M., Jr.	3 Ag.	107 5th, Box 3207	Lenoir, N. C.
Golding, L. E.	3 Tex.	229 A, Box 4158	New York, N. Y.
Goldman, Paul	2 Tex.	322 A, Box 4185	New York, N. Y.
Goldman, Stanley	4 C. E.	218 Wat., Box 3036	Brooklyn, N. Y.
Goldstein, H. E.	2 Ag.	226 C, Box 4254	New York, N. Y.
Goldston, J. G., Jr.	1 Aero.	333 8th, Box 3801	High Point, N. C.
Goldston, R. L.	1 M. E.	2306 Hillsboro St.	Kannapolis, N. C.
Goodall, Wilson	2 I. E.	315 C, Box 4277	Scranton, Pa.
Goodman, A. S.	1 Engr.	2316 Hillsboro St.	Asheville, N. C.

Name	*Classification*	*School Address*	*Home Address*
Goodman, L. G., Jr.	3 Arch. E.	21 Enterprise St.	Salisbury, N. C.
Goodrum, W. J.	2 Ch. E.	218 South, Box 3550	Greenville, N. C.
Goodson, A. B.	2 E. E.	214 A, Box 4143	Mt. Olive, N. C.
Goodson, K. W.	2 Aero.	214 A, Box 4143	Mt. Olive, N. C.
Goodson, L. A.	3 Ag.	104 5th, Box 3204	Danville, Va.
Gordon, Allen	3 Tex.	338 C, Box 4297	Paterson, N. J.
Gordon, R. M.	1 Ag.	3 South, Box 3599	Washington, D. C.
Goslen, C. H.	1 Ag.	Greenhouse, Box 5254	Pfafftown, N.C.
Goslen, H. H.	2 Ch. E.	116 A, Box 4113	Kernersville, N. C.
Gould, J. T.	1 C. E.	303 South, Box 3567	Raleigh, N. C.
Gower, Hubert	1 Ag.	111 South, Box 3511	Smithfield, N. C.
Grady, H. F.	2 Ag.	311 6th, Box 3271	Seven Springs, N. C.
Graeber, E. B., Jr.	1 Ch. E.	301 8th, Box 3769	Charlotte, N. C.
Graham, D. E.	1 Aero.	313 7th, Box 3379	Lewisville, N. C.
Graham, H. L., Jr.	2 Ch. E.	140 A, Box 4130	Goldsboro, N. C.
Graham, J. A.	4 Ag.	10 Enterprise St.	Cleveland, N. C.
Graham, W. B.	2 Aero.	304 South, Box 3568	Elkin, N. C.
Granger, R. J.	4 Tex.	Gym. Box 5061	Charlotte, N. C.
Grant, M. W.	1 Ag.	2306 Hillsboro St.	Garysburg, N. C.
Gravely, J. O. W.	1 C. E.	304 South, Box 3568	Woodsdale, N. C.
Gravely, P. S.	1 M. E.	102 7th, Box 3302	Monroe, N. C.
Graves, W. G.	3 Aero.	1620 Hillsboro St.	Mebane, N. C.
Gray, J. S.	3 I. E.	2004 Hillsboro St.	Elkin, N. C.
Gray, T. I.	4 Engr.	301 A, Box 5363	Washington, D. C.
Gray, W. R., Jr.	1 M. E.	4 8th, Box 3806	Durham, N. C.
Green, D. B., Jr.	2 Ch. E.	9 South, Box 3605	Hendersonville, N. C.
Green, D. H.	1 Ch. E.	712 W. North St.	Raleigh, N. C.
Green, L. W.	1 M. E.	329 8th, Box 3797	Rocky Mount, N. C.
Green, Morris	2 For.	301 C, Box 4266	New York, N. Y.
Green, Margaret H.	5 Oc. Inf.	601 Hinsdale St.	Raleigh, N. C.
Greene, B. W.	2 M. E.	12½ Horne St.	Elizabethtown, N. C.
Greene, G. P.	2 C. E.	316 C, Box 4378	Boone, N. C.
Greene, J. F., Jr.	1 Ch. E.	132 8th, Box 3732	Shelby, N. C.
Gregson, J. W.	2 Ch. E.	225 Hawthorne Rd.	Elizabeth City, N. C.
Gribble, R. N.	2 M. E.	4 Ferndell Lane	Charlotte, N. C.
Grier, J. H.	1 C. E.	21 Enterprise St.	Statesville, N. C.
Griffin, C. E., Jr.	2 Aero.	219 South, Box 3551	Fayetteville, N. C.
Griffin, Hazel C.	5 Oc. Inf.	615 Hillsboro St.	Raleigh, N. C.
Griffin, M. L.	1 E. E.	3 8th, Box 3805	Rocky Mount, N. C.
Griffin, S. W.	2 Ch. E.	123 South, Box 3523	LaGrange, N. C.
Griffin, W. B.	4 Arch E.	103 Park Ave.	Raleigh, N. C.
Griffin, W. E.	1 C. E.	Y. M. C. A.	Washington, D. C.
Grigg, D. T., Jr.	1 M. E.	130 8th, Box 3730	Gastonia, N. C.
Grissom, A. E.	1 Tex.	306 7th, Box 3379	Lowell, N. C.
Grose, J. A., Jr.	2 Ag.	324 South, Box 3588	Forest City, N. C.
Gross, R. E.	2 Ch. E.	131 Hawthorne Rd.	Asheville, N. C.
Grosse, E. H.	3 Tex.	2407 Clark Ave.	Gastonia, N. C.
Grouten, W. M.	2 Ag.	222 Park Ave.	Farmington, Conn.
Guba, F. A., Jr.	3 I. E.	2316 Hillsboro St.	Westfield, N. J.
Gunn, K. M.	2 Ch. E.	132 Woodburn Rd.	Greensboro, N. C.
Gurganus, A. E.	1 Ag. Ed.	301 South, Box 3565	Verona, N. C.
Guyton, R. D., Jr.	1 Cer.	1003 W. Peace St.	Raleigh, N. C.
Gwyn, N. H., Jr.	2 E. E.	103 Chamberlain St.	Lenoir, N. C.
Gyles, R. C., Jr.	3 E. E.	132 Woodburn Rd.	Raleigh, N. C.
Hagan, M. L.	1 Tex.	212 9th, Box 4319	New York, N. Y.
Hagler, J. J.	2 I. E.	106 Horne St.	Black Mountain, N. C.
Haislip, R. A., Jr.	4 Ag. Ed.	103 5th, Box 3203	Oak City, N. C.
Haislip, T. M.	2 Ag.	212 5th, Box 3224	Oak City, N. C.
Haley, W. C., Jr.	1 Ag.	Withdrew	Cary, N. C.
Hall, C. T., Jr.	1 Ag.	301 5th, Box 3225	Woodsdale, N. C.
Hall, H. G.	1 Ch. E.	105 7th, Box 3305	Salisbury, N. C.

Name	*Classification*	*School Address*	*Home Address*
Hall, J. L.	2 Ch. E.	129 South, Box 3529	Grifton, N. C.
Hall, Leroy, Jr.	1 Aero.	Withdrew	Hillsboro, N. C.
Hall, N. S.	5 Soils	210 Woodburn Rd.	Columbus, Ohio
Hall, T. S.	1 Ag.	Y. M. C. A.	Mt. Ulla, N. C.
Hall, W. C.	4 I. E.	2604 Hillsboro St.	Asheville, N. C.
Hall, W. D.	1 Ag.	4 9th, Box 4337	Lewiston, N. C.
Halliday, H. C.	3 M. E.	2302 Hillsboro St.	Hampton, Va.
Halstead, H. H.	1 Ag.	213 8th, Box 3747	Cherryville, N. C.
Hamby, E. P.	4 C. E.	104 6th, Box 3240	Salisbury, N. C.
Hamilton, L. F.	1 C. E.	315 8th	Kinston, N. C.
Hamilton, T. I.	1 Aero.	Withdrew	Columbia, N. C.
Hammond, R. K.	1 M. E.	115 South, Box 3515	Farmer, N. C.
Hamrick, G. T.	2 Ag.	220 South, Box 3552	Forest City, N. C.
Hancock, D. H.	1 C. E.	303 7th, Box 3369	Lawrence, Mass.
Handy, R. P.	5 Ag.	1814½ Arlington St.	Raleigh, N. C.
Hanff, I. H.	4 Ag.	Field House; Mail Gym.,	Scotland Neck, N. C.
Hankins, W. B.	1 Ch. E.	131 8th, Box 3731	Lexington, N. C.
Hannon, M. J.	2 Occ. Inf.	2513 Clark Ave.	Manchester, Mass.
Hanse, D. J.	4 M. E.	202 Groveland Ave.	Babylon, N. Y.
Hansen, J. T.	3 Ag.	110 6th, Box 3246	Raleigh, N. C.
Harbison, J. J.	1 C. E.	2508 Vanderbilt Ave.	Morganton, N. C.
Harbour, C. C.	2 Ch. E.	330 C, Box 4292	Roanoke Rapids, N. C.
Hardaway, T. A.	2 Ch. E.	303 5th, Box 3227	Arcadia, S. C.
Hardee, J. H.	1 Ag.	108 7th, Box 3308	High Point, N. C.
Hardee, R. E.	2 Ind. A.	122 South, Box 3522	Clayton, N. C.
Hardie, C. A.	1 Aero.	Y. M. C. A.	Minas, Brazil
Hardin, E. L., Jr.	3 M. E.	21 Enterprise St.	Salisbury, N. C.
Hardin, J. D.	3 Tex.	102 South, Box 3502	Hickory, N. C.
Hardison, H. A.	1 Ag.	301 Park Ave.	Williamston, N. C.
Hardy, E. E.	1 Ag.	212 C, Box 4240	Maury, N. C.
Hardy, J. H.	1 M. E.	125 7th, Box 3325	Snow Hill, N. C.
Hargett, R. S.	2 Tex.	206 Wat., Box 3024	High Point, N. C.
Hargrove, B. D.	5 Ag.	6 Enterprise St.	Troy, Tex.
Hargrove, R. N.	1 I. E.	709 W. Jones St.	Raleigh, N. C.
Harkey, W. T.	1 Aero.	115 N. McDowell St.	Alexandria, Va.
Harmon, A. D.	3 Aero.	2306 Hillsboro St.	Kannapolis, N. C.
Harmon, C. C.	2 Arch.	233 C, Box 4260	Gastonia, N. C.
Harper, Bob	2 Ag.	1403 Brooks Ave.	Garner, N. C.
Harper, C. B.	1 Ch. E.	211 10th, Box 4420	High Point, N. C.
Harper, H. H.	3 Ag.	203 5th, Box 3215	Garner, N. C.
Harper, W. W.	2 C. E.	204 4th, Box 3122	Tarboro, N. C.
Harrell, J. W.	1 Aero.	120 A, Box 4116	Burgaw, N.C.
Harren, J. S.	1 Tex.	222 8th, Box 3756	Newton, N. C.
Harrington, B. D.	1 Ch. E.	207 8th, Box 3141	Charlotte, N. C.
Harrington, J. S.	2 M. E.	309 South, Box 3573	Broadway, N. C.
Harris, C. M.	1 C. E.	1 9th, Box 4334	Greensboro, N. C.
Harris, D. W.	4 Ag.	204 5th, Box 3316	Newell, N. C.
Harris, H. R.	2 Tex.	116½ Groveland Ave.	Lynhaven, Va.
Harris, J. E.	1 Arch.	324 A, Box 4187	Farmville, N. C.
Harris, J. R.	2 Ch. E.	125 A, Box 4120	
Harris, K. F.	1 Ch. E.	123 A, Box 4118	Dallas, N. C.
Harris, P. C.	3 C. E.	2312 Hillsboro St.	Essex, N. C.
Harris, W. S.	2 Ag.	8 Ferndell Lane	Fayetteville, N.C.
Harrison, J. D.	1 Engr.	2708 Everett Ave.	Winston Salem, N. C.
Hartsock, C. M., Jr.	2 For.	Box 2277	Raleigh, N. C.
Hartzog, L. S.	2 I. E.	2306 Hillsboro St.	Lexington, N. C.
Harvey, A. M.	1 Tex.	10 8th, Box 3812	Lincolnton, N. C.
Hash, L. J.	3 Aero.	213 South, Box 3545	Sparta, N. C.
Hassell, A. M.	1 E. E.	102 5th, Box 3202	Spindale, N. C.
Hassell, J. L., Jr.	2 Aero.	333 C, Box 4294	Edenton, N. C.

Name	*Classification*	*School Address*	*Home Address*
Hassell, S. J.	1 Ag.	308 7th, Box 3374	Roper, N. C.
Hatfield, W. T.	1 C. E.	221 7th, Box 3353	Creswell, N. C.
Haughton, W. F.	1 Engr.	5 9th, Box 4338	Garden City, N. Y.
Hawkins, E. D.	3 M. E.	Power Plant, Box 5241	Murphy, N. C.
Hawkins, R. M.	1 Aero.	108 8th, Box 3708	Walkertown, N. C.
Hawks, S. N.	4 Ag.	206 Chamberlain St.	Norlina, N. C.
Hawley, Addison, Jr.	5 Cer.	222 C, Box 4250	Goldsboro, N. C.
Hay, O. P.	1 C. E.	105 Glenwood Ave.	Raleigh, N. C.
Hayden, C. C.	3 Tex.	2513 Clark Ave.	Charlotte, N. C.
Hayes, W. R., Jr.	2 Aero.	210 6th, Box 3258	Norlina, N. C.
Haynes, C. G.	2 Arch E.	107 A, Box 4106	Burlington, N. C.
Haynes, M. B., Jr.	1 E. E.	314 8th, Box 3782	Asheville, N. C.
Hayward, Calvin	1 Ag.	324 7th, Box 3390	Fairhaven, Mass.
Hazelberg, R. J.	5 F. B. A.	Box 5591	Raleigh, N. C.
Hearn, M. H.	4 Ag.	20 South, Box 5127	Laurinburg, N. C.
Hearn, Z. V.	1 Ag.	4 9th, Box 3616	Laurinburg, N. C.
Heath, H. G.	4 C. E.	4 E. Dixie Dr.	Statesville, N. C.
Heath, R. C.	1 Tex.	406 N. Blount St.	Raleigh, N. C.
Hecht, E. E.	1 Aero.	108 Wat., Box 3008	Norlina, N. C.
Hecht, O. R.	2 Ag. Ed.	302 6th, Box 3262	Norlina, N. C.
Hecht, W. J., Jr.	2 Ch. E.	108 Wat., Box 3008	Norlina, N. C.
Hedrick, C. L.	3 Tex.	Box 135, Cary	Cary, N. C.
Hedrick, R. W.	1 Arch. E.	213 C, Box 4241	Siler City, N. C.
Heffernan, J. A.	2 C. E.	312 A, Box 4175	Little Neck, N. Y.
Helms, V. T., Jr.	1 Ag. Ed.	215 7th, Box 3347	Monroe, N. C.
Helsabeck, R. E.	1 Aero.	2708 Everett Ave.	Winston-Salem, N. C.
Henderson, F. M.	5 R. S.	10 Maiden Lane	Raleigh, N. C.
Henderson, T. C.	2 Ag. Ed.	332 South, Box 3596	Lake Toxaway, N. C.
Hendren, W. C., Jr.	1 Ag.	228 7th, Box 3762	Carthage, N. C.
Hendricks, F. B., Jr.	1 C. E.	115 Woodburn Rd.	Charlotte, N. C.
Hendricks, H. L., Jr.	5 Chem. E.	107 4th, Box 5161	Elizabeth City, N. C.
Hendricks, J. W.	1 Tex.	311 C, Box 4273	Statesville, N. C.
Hepler, E. C., Jr.	4 Cer.	115 South, Box 3515	Greensboro, N. C.
Heritage, T. P.	3 C. E.	123 Woodburn Rd.	Burlington, N. C.
Herndon, C. N.	1 Aero.	10 Field House	Durham, N. C.
Herndon, M. E., Jr.	4 Tex.	4 Ferndell Lane	Charlotte, N. C.
Herr, F. W., Jr.	1 M. E.	202 8th, Box 3736	Waterbury, Conn.
Herring, D. P.	1 C. E.	131 7th, Box 3331	Dudley, N. C.
Herring, P. M., Jr.	1 Aero.	131 7th, Box 3331	Bowden, N. C.
Hester, R. K.	1 Ag.	327 7th, Box 3393	Bladenboro, N. C.
Hester, T. S.	1 Aero.	204 A, Box 4136	Henderson, N. C.
Hetherington, I. J., Jr.	3 M. E.	217 C, Box 4245	Baltimore, Md.
Heughan, G. P.	1 M. E.	24 8th, Box 3825	Charlotte, N. C.
Hewitt, J. C.	1 Aero.	111 8th, Box 3711	Kinston, N. C.
Heyward, T. L.	1 Aero.	207 9th, Box 4314	Goldsboro, N. C.
Heyward, W. B.	3 Tex.	4 Ferndell Lane	Charlotte, N. C.
Hicks, A. R., III	4 Ch. E.	1301 Hillsboro St.	Faison, N. C.
Hicks, G. L.	1 Ind. A.	1539 Iredell Dr.	Raleigh, N. C.
Hicks, V. M., Jr.	2 Ind. A.	1539 Iredell Dr.	Raleigh, N. C.
Hiers, J. T.	1 C. E.	116 8th, Box 3716	Wilmington, N. C.
High, S. C., Jr.	3 Ind. A.	1033 W. South St.	Raleigh, N. C.
Highsmith, L. A.	1 Ag. Ed.	117 7th, Box 3317	Currie, N. C.
Hilburn, W. B., Jr.	4 Tex.	2306 Hillsboro St.	Bladenboro, N. C.
Hilditch, W. J.	2 Ch. E.	224 Hillcrest Rd.	
Hilker, E. F., Jr.	2 M. E.	223 Hillcrest Rd.	Raleigh, N. C.
Hill, B. F.	3 Aero.	130 South	Murfreesboro, N. C.
Hill, C. R.	4 Ag. Ed.	Fuquay Springs, N. C.	Pilot Mountain, N. C.
Hill, C. U., Jr.	2 Tex.	136 C, Box 4231	Greensboro, N. C.
Hill, D. A.	1 C. E.	205 C, Box 4236	Beaufort, N. C.
Hill, V. W.	4 Ag. Ed.	311 5th, Box 3235	Youngsville, N. C.
Hilles, D. L.	2 M. E.	237 C, Box 4262	Upper Darby, Pa.

Name	*Classification*	*School Address*	*Home Address*
Hilton, P. F.	2 E. E.	114 C, Box 4211	New York, N. Y.
Hines, E. H.	2 Tex.	116½ Oberlin Rd.	Mt. Airy, N. C.
Hinkle, R. C.	1 Ch. E.	102 9th, Box 4302	Lexington, N. C.
Hinkle, W. P.	3 M. E.	209 C, Box 4238	Thomasville, N. C.
Hinnant, C. P.	1 Aero.	2202 Hillsboro St.	Clayton, N. C.
Hinshaw, H. W.	2 For.	117 Forest Rd.	Winston-Salem, N. C.
Hinson, R. B.	4 E. E.	110 5th, Box 3210	Monroe, N. C.
Hinson, W. C.	2 E. E.	211 South, Box 3543	Walstonburg, N. C.
Hinton, H. R., Jr.	4 Ag.	120 South, Box 3520	Sharpsburg, N. C.
Hinton, W. W.	1 M. E.	305 7th, Box 3371	Selma, N. C.
Hipp, G. L.	1 Tex.	328 7th, Box 3394	Concord, N. C.
Hobbs, I. A.	4 Ch. E.	228 South, Box 3560	Wilmington, N. C.
Hobbs, J. E.	4 For.	215 Park Ave.	Edenton, N. C.
Hobbs, M. E.	1 Ind. A.	7 8th, Box 3809	Raleigh, N. C.
Hobbs, W. L., Jr.	1 Ag. Ed.	230 8th, Box 3764	Delco, N. C.
Hobson, C. J.	2 Ag.	215 South, Box 3547	Boonville, N. C.
Hodges, B. D., Jr.	3 Tex.	2405 Clark Ave.	Greensboro, N. C.
Hodges, H. G., Jr.	4 Tex.	2405 Clarke Ave.	Wadesboro, N. C.
Hodges, N. H., Jr.	2 E. E.	716 W. North St.	Raleigh, N. C.
Hodges, R. S.	1 E. E.	104 10th, Box 4404	Washington, N. C.
Hodgin, W. H.	1 Ag.	333 8th, Box 3801	High Point, N. C.
Hodul, Norman	1 For.	332 7th, Box 3398	Flushing, N. Y.
Hoffman, H. B.	3 M. E.	114 A, Box 4111	Guilford College, N. C.
Hoffman, L. B.	2 M. E.	114 A, Box 4111	Guilford College, N. C.
Hoffman, M. A.	5 Ag. Ch.	203 4th, Box 3121	Lebanon, Pa.
Hoffman, W. F., Jr.	4 Ch. E.	238 C, Box 4263	Lincolnton, N. C.
Hofmann, J. G.	4 For.	2800 Fairview Rd.	Raleigh, N. C.
Holcombe, R. A.	2 For.	208 South, Box 3540	Teaneck, N. J.
Holding, L. F.	2 Engr.	211 W. Park Dr.	Raleigh, N. C.
Holland, A. C.	2 C. E.	2220 Hillsboro St.	Trenton, N. C.
Holland, C. D.	2 Ch. E.	202 A, Box 4134	Hickory, N. C.
Holland, H. H.	3 Ag.	Infirmary	Charbs, N. C.
Holland, M. B.	2 Tex.	325 A, Box 4171	Conover, N. C.
Holler, D. F.	5 Ag.	3201 Ruffin St.	Raleigh, N. C.
Holler, L. W., Jr.	1 Ag. Ed.	16 Maiden Lane	Statesville, N. C.
Holliday, A. J.	1 Ag. Ed.	A 9th, Box 4345	Jamesville, N. C.
Holliday, F. R., Jr.	3 M. E.	133 C, Box 4228	Greensboro, N. C.
Holliday, L. F.	2 Ag. Ed.	2220 Hillsboro St.	Jamesville, N. C.
Holliday, M. M.	1 Ag. Ed.	2220 Hillsboro St.	Jamesville, N. C.
Hollingsworth, Vance	1 Aero.	220 7th, Box 3352	Whiteville, N. C.
Hollis, K. A.	2 Aero.	132 Woodburn Rd.	Hebron, Me.
Holloman, B. L.	1 Ag.	301 Park Ave.	Goldsboro, N. C.
Holloman, R. P., Jr.	2 Arch. E.	109 Wat., Box 3009	Washington, N. C.
Holloway, C. H., Jr.	2 Arch. E.	2126 Country Club Dr.	Raleigh, N. C.
Holshouser, J. R., Jr.	4 E. E.	101 Wat., Box 3001	Greensboro, N. C.
Holt, A. J.	1 Ag.	212 A, Box 4141	Graham, N. C.
Holt, R. D.	3 Aero.	330 South, Box 3594	Goldsboro, N. C.
Holt, T. F.	1 M. E.	114 8th, Box 3714	Graham, N. C.
Holtzclaw, R. W.	1 M. E.	116 7th, Box 3316	Canton, N. C.
Homes, B. C., Jr.	1 Engr.	206 10th, Box 4415	Washington, N. C.
Honbarrier, A. N.	4 Ag. Ed.	112 Cox Ave.	Salisbury, N. C.
Honeycutt, J. N.	4 Ag.	102 6th, Box 3238	Varina, N. C.
Honeycutt, S. G.	1 Ag. Ed.	312 South, Box 3576	Clinton, N. C.
Hook, W. W.	2 For.	4 Ferndell Lane	Charlotte, N. C.
Hooks, R. E.	1 Ag.	114 8th, Box 3714	Whiteville, N. C.
Hoole, G. E.	2 Aero.	115 Woodburn Rd.	Charlotte, N. C.
Hoover, G. R.	1 Aero.	316 8th, Box 3784	Winston-Salem, N. C.
Hoover, R. C., Jr.	2 M. E.	4 Ferndell Lane	Concord, N. C.
Hord, E. T., Jr.	1 Tex.	2328 Byrd St.	Raleigh, N. C.
Horne, C. O., Jr.	3 E. E.	129 South, Box 3529	Greenville, N. C.
Horner, Collins	4 Ch. E.	2729 Everett Ave.	Merchantville, N. J.

Name	*Classification*	*School Address*	*Home Address*
Horowitz, Melvin	1 Tex.	104 7th, Box 3304	New York, N. Y.
Horowitz, Wilbur	3 Tex.	215 C, Box 4243	Bronx, N. Y.
Horton, Harold	2 M. E.	7 Enterprise St., Box 5341	Asheville, N. C.
Horton, J. S.	3 Tex.	1708 Park Dr.	Raleigh, N. C.
Hosea, J. R.	2 Ch. E.	304 Wat., Box 3040	Pikeville, N. C.
Hough, E. S.	1 M. E.	118 N. Boylan Ave.	Raleigh, N. C.
House, D. T.	2 For.	134 Woodburn Rd.	Beaufort, N. C.
House, J. E.	1 Cer.	9 8th, Box 3811	Fayetteville, N. C.
House, R. D., Jr.	4 Ag.	1301 Hillsboro St.	Scotland Neck, N. C.
Houston, J. J.	1 E. E.	110 7th, Box 3310	Bonlee, N. C.
Houston, R. S.	1 Ch. E.	110 8th, Box 3710	Monroe, N. C.
Howard, C. E.	1 E. E.	17 8th, Box 3819	Hemp, N. C.
Howard, P. N., Jr.	2 C. E.	12½ Horne St.	Charlotte, N. C.
Howard, R. O.	3 M. E.	222 A, Box 4151	Delanco, N. J.
Howard, W. T.	1 Tex.	Withdrew	Hemp, N. C.
Howe, A. L.	2 E. E.	10 Enterprise St.	Sanborn, N. Y
Howe, G. M.	4 For.	105 C, Box 4204	Elizabeth, N. J.
Howe, T. T.	1 Tex.	113 A, Box 4110	Durham, N. C.
Howell, A. G.	1 Ind. A.	211 9th, Box 4318	Goldsboro, N. C.
Howell, E. K.	1 E. E.	123 8th, Box 3723	Swannanoa, N. C.
Hoyle, G. D., Jr.	1 Ch. E.	205 8th, Box 3739	Charlotte, N. C.
Hoyle, W. H.	3 Ag.	18 South, Box 3614	Henderson, N. C.
Hsieh, J. C.	1 Ch. E.	2228 Hillsboro St.	New York, N. Y.
Huckabee, J. D.	4 Tex.	203 Wat., Box 3021	Charlotte, N. C.
Hudgins, F. M.	1 Ag.	221 Forest Rd.	Arden, N. C.
Hudson, J. W.	1 C. E.	A 9th, Box 4344	Tarboro, N. C.
Hudson, W. J.	1 Ind. A.	2413 Whitaker Dr.	Raleigh, N. C.
Hudspeth, J. B.	1 Ag.	314 C, Box 4276	Yadkinville, N. C.
Huff, A. W.	4 Ag.	Dairy, Box 5103	Mars Hill, N. C.
Huffstetler, S. H.	2 M. E.	221 A, Box 4150	Haw River, N. C.
Hufham, J. H.	1 M. E.	132 7th, Box 3332	Clarkton, N. C.
Hughes, E. P., Jr.	1 Ag.	334 7th, Box 3400	Spencer, N. C.
Hughes, T. M.	3 Ch. E.	202 5th, Box 3214	Wilson, N. C.
Hultz, B. E.	2 Aero.	128 C, Box 4225	Winston-Salem, N. C.
Hummel, R. B.	5 R. S.	V 3-A Cameron Court Apts.	Raleigh, N. C.
Humphrey, A. L., Jr.	2 E. E.	Power Plant, Box 5241	Warsaw, N. C.
Humphrey, J. M.	1 Ag.	8 9th, Box 4341	Shannon, N. C.
Humphreys, H. W.	3 C. E.	211 Hawthorne Rd.	Roanoke Rapids, N. C.
Hundley, R. M.	1 M. E.		Draper, N. C.
Hunt, R. L., Jr.	3 Ag.	205 South, Box 3537	Lattimore, N. C.
Hunt, W. T., Jr.	5 E. E.	Apex	Apex, N. C.
Hunter, F. C.	4 E. E.	525 N. East St.	Raleigh, N. C.
Huntley, R. W.	1 Tex.	109 8th, Box 3709	Wadesboro, N. C.
Hurst, H. C., Jr.	4 Ag.	6 South, Box 3602	Franklin, N. C.
Hurst, J. R.	2 Ch. E.	8½ Maiden Lane	Marines, N. C.
Hyers, R. D.	1 Engr.	222 7th, Box 3354	Morristown, N. J.
Icard, T. F.	2 For.	134 Woodburn Rd.	Handsom, Va.
Iglesias, C. E.	1 C. E.	116 Groveland Ave.	San Juan, Puerto Rico
Illo, F. L.	2 Engr.	204 C, Box 4235	Atlantic Highlands, N. J.
Ingram, L. J.	4 Ch. E.	4 Ferndell Lane	High Point, N. C.
Ingram, T. J.	1 Tex.	131 A, Box 4126	Lilesville, N. C.
Ingrisano, P. P.	4 C. E.	231 A, Box 4160	Brooklyn, N. Y.
Inman, J. S.	1 Ch. E.	324 8th, Box 3792	Mt. Airy, N. C.
Inscoe, L. St. C., Jr.	1 M. E.	327 8th, Box 3795	Nashville, N. C.
Ireland, C. F.	5 Soils	108 4th, Mail, Agron. Dept.	Cocoa, Fla.
Ireland, N. S.	1 M. E.	27 8th, Box 3826	Pleasantville, N. J.
Isenhour, R. B.	1 Ch. E.	101 10th, Box 4401	Charlotte, N. C.
Ivey, B. S.	1 Ag.	104 A, Box 4104	Seven Springs, N. C.
Ivey, W. R., Jr.	3 Tex.	4 Ferndell Lane	Charlotte, N. C.
Ivie, B. E., Jr.	3 M. E.	230 South, Box 3562	Leaksville, N. C.
Jackson, C. C.	3 Ag.	22 South, Box 3618	Dunn, N. C.

Name	*Classification*	*School Address*	*Home Address*
Jackson, F. Z.	1 Aero.	2 9th, Box 4335	Charlotte, N. C.
Jackson, M. C., Jr.	1 Aero.	113 8th, Box 3713	Hendersonville, N. C.
Jackson, R. S.	4 Tex.	18½ Horne St.	Ontario, Can.
Jacoby, A. H.	1 Tex.	214 7th, Box 3346	New York, N. Y.
James, A. L.	4 Tex.	239 C, Box 4264	Washington, D. C.
James, G. B.	2 Ag. Ed.	108 6th, Box 3244	Oakboro, N. C.
James, H. B.	5 Ag. Ed.	308 Forest Rd.	Raleigh, N. C.
James, M. D.	1 Tex.	21 8th, Box 3822	Wilson, N. C.
Jamison, T. L.	1 E. E.	203 7th, Box 3335	Franklin, N. C.
Jarrell, R. K.	2 M. E.	330 A, Box 4193	Charlotte, N. C.
Jarvis, H. H.	2 Aero.	340 A, Box 4199	Asheville, N. C.
Jarvis, W. W., Jr.	1 Ag.	305 9th, Box 4325	Moyock, N. C.
Jayne, W. O.	2 M. E.	104 Logan Court	Elmira, N. Y.
Jenkins, D. H.	1 C. E.	112 8th, Box 3712	Robersonville, N. C.
Jenkins, T. W.	1 Tex.	25 8th, Box 3826	Avondale, N. C.
Jennings, J. P.	1 Ag.	9 Field House	Washington, D. C.
Jenrette, Addison	3 Ag.	202 6th, Box 3250	Ash, N. C.
Jermyn, John	1 Ag.	203 9th, Box 4310	Scranton, Pa.
Jernigan, H. E.	1 Aero.	324 8th, Box 3792	Dunn, N. C.
Jerome, F. D., Jr.	2 E. E.	331 C, 4293	Pittsboro, N. C.
Jerome, J. B.	1 E. E.	113 8th, Box 3713	Coats, N. C.
Jerusik, E. F.	1 Aero.	Field House, Mail: Gym.	Chicopee, Mass.
Jessup, B. L., Jr.	1 Aero.	206 9th, Box 4313	Concord, N. C.
Jobe, A. P.	2 Ag. Ed.	2232 Hillsboro St.	Rutherfordton, N. C.
Jobe, H. R.	2 Ch. E.	316 C, Box 4244	Burlington, N. C.
Jobe, W. A.	1 M. E.	133 8th, Box 3733	Burlington, N. C.
Johns, B. R., Jr.	2 Arch. E.	106 5th. Box 3206	Richmond, Va.
Johns, J. V.	1 Ch. E.	2 Gym.	Asheville, N. C.
Johnson, A. E.	4 For.	21 South, Box 3617	Cementon, N. Y.
Johnson, A. M.	3 E. E.	19 South, Box 3615	Clayton, N. C.
Johnson, B. L.	2 E. E.	109 C, Box 4206	Lexington, N. C.
Johnson, C. B., Jr.	4 E. E.	329 South, Box 3593	Rocky Mount, N. C.
Johnson, G. P.	1 Aero.	115 C, Box 4212	Goldsboro, N. C.
Johnson, H. M.	3 Ind. A.	Infirmary	Statesville, N. C.
Johnson, Junius Edgar, Jr.	3 Ag. Ed.	312 6th, Box 3272	Catawba, N. C.
Johnson, John Enoch	4 Ag. Ed.	2220 Hillsboro St.	Wallace, N. C.
Johnson, J. Garfield	2 M. E.	105 Wat., 5253	Paw Creek, N. C.
Johnson, J. Gaston	2 Aero.	329 South, Box 3593	Rocky Mount, N. C.
Johnson, J. S.	1 Ag.	125 8th, Box 3725	Raeford, N. C.
Johnson, J. T.	1 Ag.	1601 St. Mary's St.	Raleigh, N. C.
Johnson, Melvin Badger	2 Aero.	208 5th, Box 3220	Mt. Holly, N. C.
Johnson, Myatt Bernard	2 Aero.	320-A	Bahama, N. C.
Johnson, P. R.	1 Ag.	118 A, Box 4115	Raeford, N. C.
Johnson, V. H.	4 Ag.	4 South	Kernersville, N. C.
Johnson, W. E.	1 Tex.	312 C, Box 4274	Demarest, N. J.
Johnson, W. H., Jr.	4 Ch. E.	2604 Hillsboro St.	Asheville, N. C.
Johnson, W. S., Jr.	4 Aero.	208 Wat., Box 3026	Montgomery, Ala.
Johnston, W. L.	1 Ch. E.	311 9th, Box 4331	Mooresville, N. C.
Jones, C. E.	1 M. E.	231 7th, Box 3363	Tarboro, N. C.
Jones, D. W.	2 Ag. Ed.	107 A, Box 4160	Boiling Springs, N. C.
Jones, E. L., Jr.	2 Tex.	8½ Maiden Lane	Charlotte, N. C.
Jones, G. E.	2 Tex.	138 A, Box 4130	New Bern, N. C.
Jones, G. L.	2 Ag.	209 Wat., Box 3027	Kinston, N. C.
Jones, G. N., Jr.	3 Aero.	207 Glascock St.	Raleigh, N. C.
Jones, G. W.	2 Ind. A.	209 8th, Box 3743	Roxboro, N. C.
Jones, H. D., Jr.	1 Aero.	330 7th, Box 3396	Charleston, S. C.
Jones, J. C.	1 Ag.	217 7th, Box 3349	Snow Hill, N. C.
Jones, J. H., Jr.	2 Ch. E.	211 C, Box 4239	Jersey City, N. J.
Jones, J. S., Jr.	1 C. E.	307 7th, Box 3373	Ridgeway, N. C.
Jones, L. C.	5 Ag.	106 4th, Box 3116	Frankfort, Kansas
Jones, L. G., Jr.	1 Tex.	323 8th, Box 3791	Gastonia, N. C.

Name	*Classification*	*School Address*	*Home Address*
Jones, M. deB., Jr.	2 Ch. E.	4 Ferndell Lane	Charlotte, N. C.
Jones, O. R.	2 M. E.	1720 Hillsboro St.	Wilmington, N. C.
Jones, R. M.	2 Ch. E.	126 A, Box 4121	Salisbury, N. C.
Jones, T. A.	1 Engr.	311 8th, Box 3779	Charlotte, N. C.
Jones, T. H.	1 Ag. Ed.	Field House, Mail: Gym.	Varina, N. C.
Jones, Wayland, Jr.	2 Ag.	125 Woodland Ave.	Smithfield, N. C.
Jones, W. J.	1 Engr.	2004 Hillsboro St.	Elkin, N. C.
Jordan, H. K.	2 M. E.	327 South, Box 3591	Charlotte, N. C.
Jordan, H. L.	2 Ag.	209 Wat., Box 3027	Clarkton, N. C.
Jordan, W. E., Jr.	4 M. E.	1720 Hillsboro St.	Charlotte, N. C.
Josehans, S. J.	2 C. E.	322 C, Box 4284	Wilmington, N. C.
Joyce, J. H.	1 For.	324 A, Box 4187	Long Branch, N. J.
Joyner, I. E.	1 M. E.	115 7th, Box 3315	Zebulon, N. C.
Joyner, J. A.	3 E. E.	235 A, Box 9162	Sharpsburg, N. C.
Justice, J. P.	1 I. E.	211 8th, Box 3745	Pittsboro, N. C.
Kabakow, H. M.	1 Ag.	122 7th, Box 3322	Bronx, N. Y.
Kaczynski, Henry	2 For.	314 C, Box 4276	Trenton, N. J.
Kallam, G. H.	1 Aero	101 9th, Box 4301	Charlotte, N. C.
Kaplan, Morton	1 Tex.	212 9th, Box 4319	New York, N. Y.
Kapner, Lawrence	1 C. E.	104 7th, Box 3304	New York, N. Y.
Karesh, R. L.	4 Ch. E.	218 Wat., Box 5458	Charlotte, N. C.
Katkaveck, L. F.	1 Aero.	A 9th, Box 4344	Manchester, Conn.
Kattermann, A. W., Jr.	4 Tex.	237 A, Box 4163	Paterson, N. J.
Katz, H. S.	2 For.	2304 Clark Ave.	Middletown, N. Y.
Katz, M. B.	3 Ag.	2304 Clark Ave.	Morganton, N. C.
Katz, S. S.	1 Aero.	107 7th, Box 3307	Newark, N. J.
Kearney, I. H.	2 Ag. Ed.	124 Woodburn Rd.	Franklinton, N. C.
Kearney, W. W., Jr.	3 I. E.	2514 Clark Ave.	Rocky Mount, N. C.
Kearns, C. E., Jr.	4 Ag.	18 South, Box 3614	Asheboro, N. C.
Kearns, W. C.	4 Ag.	115 Woodburn Rd.	Pleasant Garden, N. C.
Keeler, M. G., Jr.	2 E. E.	303 6th, Box 3263	Fort Bragg, N. C.
Keen, E. R.	1 Ag. Ed.	304 C, Box 4269	Newton Grove, N. C.
Kehlmann, Martin	1 Aero.	128 7th, Box 3328	Bronx, N. Y.
Keiger, B. A., Jr.	3 Aero.	2804 Everette Ave.	Winston-Salem, N. C.
Kelly, A. Y., Jr.	2 Engr.	311 Hillcrest Rd.	Raleigh, N. C.
Kelly, J. C., Jr.	4 Ch. E.	4 Ferndell Lane	Greensboro, N. C.
Kelly, J. F.	3 C. E.	314 Wat., Box 3050	Alma, N. C.
Kelly, R. S.	3 E. E.	232 South, Box 3564	Laurel Hill, N. C.
Kelly, R. W.	2 M. E.	2220 Hillsboro St.	Merrick, N. Y.
Kelly, W. F.	1 Engr.	311 Hillcrest Rd.	Raleigh, N. C.
Kelman, Arthur	5 Ag.	2804 Hillsboro St.	Providence, R. I.
Kelner, Albert	5 Bot.	302 4th, Box 3128	Philadelphia, Pa.
Kemper, E. H.	4 Aero.	330 South, Box 3594	Shelby, N. C.
Kendall, C. A.	4 Arch. E.	115 Wat., Box 3015	Greensboro, N. C.
Kendall, R. H.	4 Ag. Ed.	Brooks Ave., Box 5441	Norwood, N. C.
Kenyon, B. W., Jr.	5 Ag.	J 2 Raleigh Apts.	Raleigh, N. C.
Kenyon, J. I.	2 Aero.	412 Dixie Trail	Raleigh, N. C.
Kessel, C. E.	2 Tex.	Y. M. C. A.	Far Rockaway, N. Y.
Ketchie, G. M., Jr.	3 C. E.	314 Wat., Box 3050	Charlotte, N. C.
Ketchum, H. B., Jr.	3 Ch. E.	1720 Hillsboro St.	Mt. Holly, N. C.
Kidd, C. S.	1 Ag.	1707 Park Dr.	Dobson, N. C.
Kilby, C. H.	1 C. E.	302 7th, Box 3368	Milton, N. C.
Killeri, M. R.	4 For.	301 Park Ave.	Pittston, Pa.
Kilpatrick, R. H.	2 M. E.	206 South, Box 3538	Greensboro, N. C.
Kimball, C. N., Jr.	3 Cer.	309 Wat., Box 3045	Enfield, N. C.
Kimsey, E. P.	1 M. E.	Y. M. C. A.	High Point, N. C.
King, C. S.	3 Ch. E.	203 A, Box 4135	Charlotte, N. C.
King, J. H.	2 Tex.	312 C, Box 4274	Boonville, N. C.
King, J. N.	1 M. E.	106 8th, Box 3706	Salisbury, N. C.
King, J. R.	1 Aero.	125 8th, Box 3725	Leaksville, N. C.
King, V. A.	2 E. E.	118 E. Park Dr.	Topton, N. C.

Name	*Classification*	*School Address*	*Home Address*
Kingsolver, J. K.	4 Ch. E.	104 Wat., Box 3004	Hickory, N. C.
Kiopekly, George	2 Ch. E.	1009 W. Lenoir St.	Raleigh, N. C.
Kirby, A. M.	2 Ch. E.	125 Woodburn Rd.	Durham, N. C.
Kirkpatrick, J. F.	1 C. E.	315 8th, Box 3783	Greensboro, N. C.
Kiser, R. A.	3 Ag. Ed.	304 6th, Box 3264	Kings Mountain, N. C.
Kitchen, J. L.	2 Tex.	2405 Clark Ave.	Scotland Neck, N. C.
Kivett, J. G.	1 Ag. Ed.	6 9th, Box 4339	Carthage, N. C.
Kluttz, H. A.	4 M. E.	2623 Leesville Rd.	Raleigh, N. C.
Kluttz, M. L.	4 Ag. Ed.	204 4th, Box 3122	Salisbury, N. C.
Knee, D. A.	1 Ch. E.	130 8th, Box 3730	Charlotte, N. C.
Knight, D. L.	1 Oc. Inf.	509 E. Franklin St.,	Raleigh, N. C.
Knight, G. A.	1 C. E.	210 10th, Box 4419	Winston-Salem, N. C.
Knight, R. G., Jr.	2 Ch. E.	218 South, Box 3550	Roanoke Rapids, N. C.
Knight, W. R., Jr.	4 M. E.	216 Wat., Box 3034	Brooklyn, N. Y.
Knoth, A. C.	2 Aero.	313 C, Box 4275	Asheville, N. C.
Knox, E. L.	3 Ag.	12 South, Box 3608	Kelford, N. C.
Knudsen, A. R.	5 Ag.	402 West Lenoir St.	Provo, Utah
Koonce, T. R., Jr.	2 C. E.	327 South, Box 3591	Fair Bluff, N. C.
Kornegay, S. D.	3 Ag. Ed.	311 6th, Box 3271	Mt. Olive, N. C.
Kostukowich, William	2 C. E.	316 C, Box 4278	Bronx, N. Y.
Koury, E. W.	2 Tex.	335 A, Box 4196	Burlington, N. C.
Kramer, Margaret	Auditor	Meredith College	Elizabeth City, N. C.
Krentzman, L. N.	1 C. E.	227 7th, Box 3359	Lewistown, Pa.
Krochmal, Arnold	4 Ag.	1809 Park Dr.	New York, N. Y.
Kronstadt, Reuben	5 Ag.	304 4th, Box 3130	New York, N. Y.
Kuhn, C. R.	2 Tex.	500 Devereaux St.	Raleigh, N. C.
Kuiper, J. J.	2 M. E.	6 Ferndell Lane	Hawthorne, N. J.
Kuwaski, B. P.	3 Tex.	220 A, Box 4149	New Bedford, Mass.
Kwiatkoski, J. D.	1 Aero.	229 South, Box 3561	Jeannette, Pa.
Lackey, D. W.	2 Ag.	206 South, Box 3538	Lenoir, N. C.
Lambe, T. W.	4 C. E.	413 Calvid Rd.	Raleigh, N. C.
Lambert, J. T.	1 Ch. E.	102 Logan Court	Raleigh, N. C.
Lambeth, J. B.	1 C. E.	16 Enterprise St.	High Point, N. C.
Lamm, J. A., Jr.	1 E. E.	302 7th, Box 3368	Alexandria, Va.
Lamm, J. E.	4 Ag. Ed.	311 5th, Box 3235	Louisburg, N. C.
Lamm, J. R.	1 Arch.	8 Ferndell Lane	Wilson, N. C.
Lamm, T. A.	1 E. E.	201 9th, Box 4308	Lucama, N. C.
LaMorte, W. J.	4 C. E.	2513 Clark Ave.	Bronxville, N. Y.
Lamport, M. H.	4 Tex.	237 A, Box 4163	New York, N. Y.
Lancaster, J. M.	1 M. E.	231 7th, Box 3363	S. Dartmouth, Mass.
Land, W. A.	1 Aero.	10 Enterprise St.	Chadbourn, N. C.
Lane, C. E.	1 Ag.	Field House, Box 5082	Bowden, N. C.
Lane, C. M.	1 M. E.	110 South, Box 3510	Greensboro, N. C.
Lane, W. A.	3 Tex.	311 South, Box 3575	Greensboro, N. C.
Laney, L. C.	3 Ag.	225 South, Box 3557	Maiden, N. C.
Langley, G. E.	3 Aero.	212 6th, Box 3260	Norfolk, Va.
Lapeyre, K. P.	1 Ch. E.	325 8th, Box 3793	Jacksonville, Fla.
Larkin, R. C.	5 Ag.	2303½ Clark Ave.	Raleigh, N. C.
La Rue, W. C.	5 Ag.	501 Aycock St.	Raleigh, N. C.
Lassiter, A. T.	3 Ag.	10 Enterprise St.	Clayton, N. C.
Latham, F. M.	1 Ch. E.	210 9th, Box 4317	New Bern, N. C.
Latham, H. V.	4 M. E.	301 Wat., Box 3037	Belhaven, N. C.
Latham, T. J.	2 Tex.	1408 Hillsboro St.	Washington, N. C.
Laughlin, R. C.	1 Ch. E.	224 7th, Box 3356	Tarboro, N. C.
Lavin, J. N.	4 Ch. E.	16 Maiden Lane	Bradley Beach, N. J.
Lawing, W. J.	1 M. E.	16 Horne St.	Charlotte, N. C.
Lawrence, B. J., Jr.	2 Ag.	1021 Cowper Dr.	Raleigh, N. C.
Lawrence, D. H.	2 Engr.	125 Woodburn Rd.	New Bern, N. C.
Lawrence, L. R.	3 Arch. E.	315 Wat., Box 3051	Portsmouth, Va.
Lawrence, W. P., Jr.	1 M. E.	402 W. Whitaker Mill Rd.	Raleigh, N. C.
Lawson, W. D.	2 Ag.	224 C, Box 4252	Norfolk, Va.

Name	*Classification*	*School Address*	*Home Address*
Leagans, J. E.	4 Ag. Ed.	24 Shepherd St.	Cana, N. C.
Leak, H. L.	1 Geol.	102 8th, Box 3702	Rockingham, N. C.
Leak, R. C.	4 Tex.	227 South, Box 3559	Terre Haute, Ind.
Leak, R. P.	3 E. E.	2209½ Hope St.	Rockingham, N. C.
Lebowitz, M. H.	4 For.	329 A, Box 4192	Brooklyn, N. Y.
Ledbetter, T. B.	4 M. E.	221 South, Box 3556	Rockingham, N. C.
Ledford, R. B.	1 Engr.	2211 Oxford Rd.	Raleigh, N. C.
Lee, H. A.	1 Aero.	230 8th, Box 3764	Hampton, Va.
Lee, J. F.	1 Ag.	213 9th, Box 4320	Four Oaks, N. C.
Lee, N. K., Jr.	4 M. E.	213 Wat., Box 3031	Hampton, Va.
Lee, W. D.	5 Ag.	318 Furches St.	Raleigh, N. C.
Leeper, J. S.	2 Tex.	333 A, Box 4195	Gastonia, N. C.
Lefler, D. F.	1 Aero.	228 8th, Box 3762	Albemarle, N. C.
LeGrand, H. E.	2 Tex.	302 5th, Box 3226	Shelby, N. C.
LeGrand, W. F.	4 Tex.	117 C, Box 4214	Shelby, N. C.
Leitch, J. C.	1 Ag.	101 8th, Box 3701	Elberton, Ga.
Leitch, J. D.	2 Ch. E.	113 A, Box 4110	Mt. Airy, N. C.
LeLoudis, W. E.	4 I. E.	1301 Hillsboro St.	Rocky Mount, N. C.
Lemlich, B. R.	2 Ag.	221 C, Box 4249	Brooklyn, N. Y.
Lemond, F. H., Jr.	1 Aero.	205 8th, Box 3739	Charlotte, N. C.
Lentz, W. W., Jr.	4 Ag.	215 Park Ave.	High Point, N. C.
Leonard, B. T.	2 M. E.	211 A, Box 4140	Norfolk, Va.
Leonard, Jack	1 M. E.	209 9th, Box 4316	Greensboro, N. C.
Leonard, W. H.	4 Tex.	131 South, Box 3531	Lexington, N. C.
Leonard, W. L., Jr.	4 M. E.	211 A, Box 4140	Raleigh, N. C.
Leveen, I. A.	3 Tex.	315 C, Box 4277	New York, N. Y.
Levin, E. J.	4 E. E.	9 8th, Box 3811	Mt. Iron, Minn.
Levin, R. E.	3 Tex.	205 C, Box 4236	Brooklyn, N. Y.
Levine, Philip	1 Aero.	328 C, 4290	Greensboro, N. C.
Levye, M. A.	2 Tex.	2226 Hillsboro St., Box 5091	Providence, R. I.
Lewis, Benjamin F., Jr.	3 E. E.	214 South, Box 3546	Fountain, N. C.
Lewis, Brian F.	2 Ch. E.	116 A, Box 4113	Hickory, N. C.
Lewis, C. E.	1 Ag.	130 7th, Box 3330	Rocky Point, N. C.
Lewis, E. E.	1 C. E.	120 8th, Box 3720	Fairmont, N. C.
Lewis, H. G.	3 Arch. E.	224 C, Box 4252	Morehead City, N. C.
Lewis, L. D.	2 E. E.	231 A, Box 4160	Macclesfield, N. C.
Lewis, R. A.	4 Ch. E.	305 Wat., Box 3041	Raleigh, N. C.
Lewis, T. C.	2 Arch. E.	1714 Park Dr.	Dallas, N. C.
Lewis, W. D.	4 Ag. Ed.	306 5th, Box 3230	Fairmont, N. C.
Lewis, W. H.	1 Ag.	3 Field House	Scotland Neck, N. C.
Lewis, W. M.	3 Ag.	2710 Rosedale Ave.	Faison, N. C.
Leysath, E. F.	4 For.	215 Park Ave.	Springfield, Vt.
Light, C. I.	3 M. E.	215 C, Box 4243	Brooklyn, N. Y.
Light, E. T.	4 M. E.	210 Wat., Box 3026	Haddonfield, N. J.
Liles, A. E.	4 Ag. Ed.	Cafeteria	Littleton, N. C.
Liles, M. B., Jr.	1 Aero.	Route 1	Zebulon, N. C.
Lineback, W. E.	3 Ch. E.	128 South, Box 3528	Winston-Salem, N. C.
Lingle, A. W.	2 Ag. Ed.	309 South, Box 3573	Salisbury, N. C.
Linten, I. L.	3 M. E.	2304 Clark Ave.	Newtonville, Mass.
Linville, J. D.	1 Tex.	8 8th, Box 3810	Kernersville, N. C.
Little, F. L., Jr.	4 Ag.	117½ Woodburn Rd., Box 5524	Ayden, N. C.
Little, R. M.	1 M. E.	204 A, Box 4136	Greensboro, N. C.
Little, W. B.	1 Tex.	108 7th, Box 3308	Wadesboro, N. C.
Little, W. E.	4 Ag. Ed.	111 6th, Box 3247	Grimesland, N. C.
Livermon, R. H.	4 C. E.	326 South, Box 3590	Charlotte, N. C.
Lodor, J. C.	1 C. E.	307 8th, Box 3775	Wilmington, N. C.
Loewensberg, Walter	3 M. E.	332 South, Box 3596	Baltimore, Md.
Loftin, W. D.	3 Ag.	302 5th, Box 3226	Kinston, N. C.
Long, B. N.	4 Ch. E.	8 Ferndell Lane	Greensboro, N. C.
Long, C. R.	3 C. E.	2713 Bartmettler St.	Roxboro, N. C.
Long, L. W.	3 E. E.	122 A, Box 4117	Forest City, N. C.

Name	*Classification*	*School Address*	*Home Address*
Love, J. D.	4 Ag. Ed.	8 Ferndell Lane	Stanfield, N. C.
Love, N. M.	1 Ch. E.	303 C, Box 4268	Fayetteville, N. C.
Low, D. N.	2 M. E.	238 A, Box 4164	Burnsville, N. C.
Low, J. G., Jr.	2 Engr.	303 A, Box 4169	Burnsville, N. C.
Lowder, J. P., Jr.	2 Ag.	2202 Hillsboro St.	Norwood, N. C.
Lowdermilk, R. S.	1 E. E.	309 7th, Box 3375	Mt. Gilead, N. C.
Lowell, W. F., Jr.	1 Tex.	313 8th, Box 3781	Newton Center, Mass.
Lowery, J. B.	2 Tex.	117 Wat., Box 3017	New Bern, N. C.
Loy, J. P.	1 E. E.	208 8th, Box 3742	Burlington, N. C.
Lubin, Ben	4 Ag.	312 Wat., Box 3048	Newark, N. J.
Luerich, W. H.	1 Aero.	213 7th, Box 3345	Elizabeth, N. J.
Luke, E. B.	4 Engr.	318 Wat., Box 3054	Goldsboro, N. C.
Lumsden, J. C.	2 Ch. E.	726 S. Boylan Ave.	Raleigh, N. C.
Lundberg, G. F., Jr.	2 Tex.	409 Chamberlain St.	Chicago, Ill.
Lupton, H. E.	1 E. E.	312 8th, Box 3780	Bayboro, N. C.
Lutz, R. B.	3 For.	2004 Hillsboro St.	Norwalk, Conn.
Lyerly, R. L.	2 M. E.	112 South, Box 3512	Thomasville, N. C.
Lyle, J. A.	5 Ag.	C 1 Wilmont Apts.	Lexington, Ky
McAdams, C. K.	4 Ag. Ed.	Y. M. C. A.	Mebane, N. C.
McAllister, J. F.	2 Tex.	327 C, Box 4289	Biscoe, N. C.
McAulay, J. J.	4 Tex.	2405 Clark Ave.	Mt. Gilead, N. C.
McCabe, A. M., Jr.	2 M. E.	2608 Lochmoor Dr.	Raleigh, N. C.
McClain, E. F.	5 Ag.	126 8th	Mathison, Miss.
McCord, H. S., Jr.	1 Aero.	233 7th, Box 3365	Alexandria, Va.
McCormick, J. L.	1 Tex.	2 Gym.	Sanford, N. C.
McCoy, W. J., Jr.	1 Aero.	209 C, Box 4239	Charlotte, N. C.
McCrary, C. E.	1 Ch. E.	325 8th, Box 3793	Charlotte, N. C.
McCrary, E. M.	1 M. E.	2221 Circle Dr.	Raleigh, N. C.
McCrary, O. F., Jr.	3 M. E.	1029 W. South St.	Raleigh, N. C.
McCulloch, C. A.	1 C. E.		Pleasant Garden, N. C.
McDaniel, C. M.	1 Ag.	Field House	New London, N. C.
McDaniel, J. L.	1 E. E.	115 Woodburn Rd.	San Diego, Calif.
McDavid, F. R.	1 Aero.	106 10th, Box 4406	Sanford, N. C.
McDermott, J. M.	2 Aero.	120 Forest Rd.	Vass, N. C.
McDiarmid, S. N.	1 Arch.	213 9th, Box 4320	Shelby, N. C.
McDonald, P. H.	1 Engr.	104 9th, Box 4304	Carthage, N. C.
MacDougall, J. E., Jr.	4 Tex.	315 Wat., Box 3515	Charlotte, N. C.
McDowell, Dorothea	5 Oc. Inf.	301 Bickett Blvd.	Raleigh, N. C.
McDowell, F. H.	2 Ag. Ed.	110 5th, Box 3210	Clyde, N. C.
McDowell, R. E., Jr.	4 Ag.	23 South, Box 3619	Charlotte, N. C.
McEachern, J. H.	2 Aero.	103 Chamberlain St.	Wilmington, N. C.
McFarland, E. H., Jr.	1 For.	322 7th, Box 3388	Oxford, N. C.
McGarity, G. W.	4 Tex.	4 Ferndell Lane	Charlotte, N. C.
McGhee, W. P.	1 I. E.	320 8th, Box 3785	Pittsburgh, Pa.
McGowan, J. G.	1 Ag.	106 Logan Court	Faison, N. C.
McGrath, F. J., Jr.	1 C. E.	6 Field House	Morris Plains, N. J.
McGuire, T. A.	1 Ag. Ed.	318 7th, Box 3381	Norton, N. C.
McInnis, N. M., Jr.	1 Tex.	Withdrew	Fayetteville, N. C.
MacIntyre, A. B.	3 E. E.	Avents Ferry Rd.	Raleigh, N. C.
McIntyre, R. D.	1 Tex.	15 8th, Box 3817	Red Oak, N. C.
McKay, G. P.	3 M. E.	2316 Hillsboro St.	Dunn, N. C.
McKay, R. W.	4 Ch. E.	1301 Hillsboro St.	Warren, Ohio
McKenzie, J. W., Jr.	1 Ag.	102 8th, Box 3709	Cordova, N. C.
McKinne, Collin	3 E. E.	326 8th, Box 3794	Louisburg, N. C.
McKinne, Philip	1 For.	226 8th, Box 3760	Louisburg, N. C.
McKinney, H. A.	2 Tex.	303 Wat., Box 3039	Durham, N. C.
McKinney, J. R.	1 Ag.	Withdrew	Mt. Airy, N. C.
McKoin, C. C., Jr.	1 Aero.	209 9th, Box 4316	Thomasville, N. C.
McLaughlin, R. L.	4 Tex.	201 Wat., Box 3019	Pittsburgh, Pa.
McLaughlin, T. K.	1 Ch. E.	120 7th, Box 3320	Cleveland, N. C.
McLawhorn, R. H., Jr.	1 Ag.	124 C, Box 4221	Winterville, N. C.

Name	*Classification*	*School Address*	*Home Address*
McLean, C. D.	1 Tex.	218 Edenton St.	Raleigh, N. C.
McLemore, C. H.	2 Aero.	14 South, Box 3610	Godwin, N. C.
McLendon, H. F.	3 Tex.	102 A, Box 4102	Burlington, N. C.
McLeod, W. A., Jr.	3 Ag. Ed.	127 A, Box 4127	Sanford, N. C.
MacMillan, D. P.	1 Aero.	331 6th, Box 3799	Fayetteville, N. C.
McMillan, E. C.	4 C. E.	4 Ferndell Lane	Marion, N. C.
McNair, C. R., Jr.	2 E. E.	202 Wat., Box 3920	Rockingham, N. C.
McNairy, A. W.	3 Aero.	110 South, Box 3510	Greensboro, N. C.
McNeely, J. E., Jr.	2 Tex.	119 C, Box 4281	Cooleemee, N. C.
McNeely, R. R.	4 Ag.	4 Malden Lane	Cleveland, N. C.
McPherson, W. T.	1 Ag.	120 C, Box 4217	Mebane, N. C.
McRainey, J. T., Jr.	1 E. E.	12 8th, Box 3814	Lumberton, N. C.
McRorie, R. A.	1 Ch. E.	127 8th, Box 3727	Statesville, N. C.
McSwain, R. R.	2 C. E.	212 South, Box 3544	Shelby, N. C.
Mackie, J. D.	2 Ag.	215 South, Box 3547	Yadkinville, N. C.
Macon, J. A.	4 Ch. E.	211 Groveland Ave.	Wake Forest, N. C.
Macon, Nathaniel	1 Aero.	225 8th, Box 3757	New Bern, N. C.
Macon, T. G.	1 Aero.	1161/2 Oberlin Rd.	Mt. Airy, N. C.
Maddrey, W. G., Jr.	1 Aero.	323 E. Lane St.	Raleigh, N. C.
Maddry, H. B.	3 C. E.	Avent Ferry Rd.	Raleigh, N. C.
Mahone, R. D.	1 For.	214 C, Box 4242	Williamsburg, Va.
Main, E. W.	2 M. E.	.....	Delanco, N. J.
Mann, B. I.	1 Ag.	132 8th, Box 3732	Pendleton, N. C.
Manning, H. L.	2 Ag.	123 C, Box 4220	Williamston, N. C.
Mannian, J. J.	1 For.	323 C, Box 4285	Bronx, N. Y.
Mappus, W. A.	5 Ag.	310 4th, Box 3127	Charleston, S. C.
Margolis, A. W.	2 Tex.	131 South, Box 3531	Hendersonville, N. C.
Markham, J. T.	1 M. E.	323 South, Box 3587	Elizabeth City, N. C.
Marks, R. H.	3 Ch. E.	226 South, Box 3558	Bronxville, N. Y.
Marley, W. E., Jr.	1 Ag.	.....	Cary, N. C.
Marshall, C. M.	2 Tex.	2405 Clark Ave.	Charlotte, N. C.
Martin, C. F., Jr.	3 Tex.	120 Woodburn Rd.	Cramerton, N. C.
Martin, C. M.	1 Aero.	220 8th, Box 3754	Gastonia, N. C.
Martin, G. A.	1 Ag.	2406 Stafford Ave.	Stony Point, N. C.
Martin, G. D.	3 Cer.	2514 Clark Ave.	Charlotte, N. C.
Martin, J. D.	3 For.	226 8th, Box 3760	Roanoke, Va.
Martin, M. D.	4 Ch. E.	506 9th, Box 4326	Liberty, N. C.
Martin, O. F., Jr.	3 For.	2514 Clark Ave.	Decatur, Ga.
Martin, W. D., Jr.	3 Arch.	1709 Hillsboro St.	Raleigh, N. C.
Masich, A. M., Jr.	2 Ch. E.	321 C, Box 4283	Winston Salem, N. C.
Mason, D. D.	5 Soils	202 Groveland Ave.	Abingdon, Va.
Massengill, H. K.	1 Tex.	525 N. Bloodworth St.	Raleigh, N. C.
Massey, P. H., Jr.	1 Ag.	302 Wat., Box 3038	Franklinton, N. C.
Masters, J. F.	1 Tex.	108 Chamberlain St.	Wintson-Salem, N. C.
Mathewson, P. LeB.	2 Tex.	10 Enterprise St.	Bristol, R. I.
Matthews, Clement Hamilton	2 E. E.	206 6th	Kipling, N. C.
Matthews, Clifton Harding	2 M. E.	112 South, Box 3512	Stokesdale, N. C.
Mauney, G. H.	4 Tex.	104 Logan Court	Kings Mountain, N. C.
May, W. L., Jr.	3 Engr.	102 Logan Court	Rockingham, N. C.
Mayer, W. L., Jr.	1 Tex.	20 Bagwell Ave.	Raleigh, N. C.
Mayfield, T. M., Jr.	2 C. E.	213 C, Box 4241	Monroe, N. C.
Maynard, J. T.	3 For.	2704 Clark Ave.	Williamsburg, Va.
Mayo, R. O., Jr.	2 M. E.	328 C, Box 4290	Rocky Mount, N. C.
Mehaffey, C. B.	1 M. E.	115 8th, Box 3715	Arlington, Va.
Melton, J. G.	3 Tex.	102 5th, Box 3202	Avondale, N. C.
Menius, E. F., Jr.	2 E. E.	111 C, Box 4208	New Bern, N. C.
Meredith, W. B., II.	3 Engr.	8 Ferndell Lane	Raleigh, N. C.
Merker, D. R.	5 Soils	105 4th, Box 3115	Bellevue, Pa.
Merrell, G. D., Jr.	3 E. E.	223 C, Box 4251	Beaufort, N. C.
Merritt, B. O.	1 M. E.	316 7th, Box 3382	Snow Hill, N. C.
Merritt, R. W.	1 Ag.	2412 Everett Ave.	Goldsboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Messick, J. E.	1 Cer.	101 9th, Box 4301	Charlotte, N. C.
Messmer, E. J.	1 E. E.	206 8th, Box 3047	Allentown, Pa.
Metcalfe, W. L.	2 E. E.	700 N. East St.	Tampa, Fla.
Meyer, T. J.	1 M. E.	127 7th, Box 3327	Charlotte, N. C.
Michaels, Abraham	4 Aero.	2514 Clark Ave.	Brooklyn, N. Y.
Michal, D. H.	2 Aero.	8½ Maiden Lane	Canton, N. C.
Middleton, D. L.	4 Engr.	2830 Bartmettler St.	Raleigh, N. C.
Middleton, G. W.	2 Engr.	230 A, Box 4159	Warsaw, N. C.
Midgette, W. B.	1 Cer.	104 Duncan St.	Raleigh, N. C.
Midyette, A. L., Jr.	4 Ch. E.	306 South, Box 3570	Swan Quarter, N. C.
Milam, F. M.	5 Ag.	2514 Clark Ave.	Calvin, W. Va.
Miles, J. W.	1 C. E.	221 8th, Box 3755	Raleigh, N. C.
Miller, C. G., Jr.	1 C. E.	B 2 10th, Box 4423	Waynesville, N. C.
Miller, F. E., Jr.	4 Ag.	1628 Park Dr.	Raleigh, N. C.
Miller, F. W.	1 Tex.	6 Field House	Jeannette, Pa.
Miller, H. L.	4 Cer.	316 South, Box 3580	Mooresville, N. C.
Miller, M. T.	2 C. E.	235 C, Box 4261	North Wilkesboro, N. C.
Miller, N. B.	1 C. E.	229 8th, Box 3763	Salisbury, N. C.
Miller, R. O.	1 Tex.	127 Woodburn Rd.	Concord, N. C.
Miller, W. A.	3 E. E.	21 Enterprise St.	Concord, N. C.
Miller, W. E.	1 Tex.	10 Enterprise St.	Chadbourn, N. C.
Miller, W. J., Jr.	1 Arch.	105 9th, Box 4305	Lenoir, N. C.
Milliken, J. S., Jr.	4 E. E.	1301 Hillsboro St.	Southern Pines, N .C.
Mills, J. A.	2 M. E.	114 E. Park Dr.	Raleigh, N. C.
Millsaps, L. M.	3 Aero.	217 South, Box 3549	Asheboro, N. C.
Mimms, J. C.	1 Ch. E.	2513 Clark Ave.	Durham, N. C.
Mims, C. H., Jr.	2 Ch. E.	Wake Forest Rd.	Raleigh, N. C.
Mitchell, F. W.	1 Ag. Ed.	104 9th, Box 4304	Bunn, N. C.
Mitchell, M. H., Jr.	2 Aero.	321 A, Box 4184	Weldon, N.C.
Mitchiner, S. T.	3 Aero.		Garner, N. C.
Mize, George A., Jr.	1 Ch. E.	2830 Mayview Rd.	Statesville, N. C.
Mock, B. A.	2 Tex.	9 South, Box 3605	Boonville, N.C.
Moffat, D. J.	2 Ch. E.	321-A, Box 4184	Waterbury, Conn.
Money, C. O.	1 Ch. E.	212 8th, Box 3746	Mt. Airy, N. C.
Monroe, R. J.	5 Ag.	202 Groveland Ave.	Dysart, Iowa
Monroe, T. G. Jr.,	3 Aero.	103 Chamberlain St.	Hamlet, N. C.
Montague, E. B.	1 C. E.	202 C, Box 4233	Goldsboro, N. C.
Moody, W. E., Jr.	1 Aero.	210 E. Franklin St.	Raleigh, N. C.
Moore, B. D., Jr.	1 E. E.	224 8th, Box 3758	Stokes, N. C.
Moore, D. B.	1 E. E.	105 8th, Box 3208	Marshville, N. C.
Moore, J. F.	2 M. E.	213 A, Box 4142	Kannapolis, N. C.
Moore, M. S.	1 For.	22 8th, Box 3823	Whiteville, N. C.
Moore, R. C., Jr.	1 Ag.	Field House, Box 5082	Bowden, N. C.
Moore, Vaughn, Jr.	1 M. E.	110 N. Bloodworth St.	Raleigh, N. C.
Moore, W. P., Jr.	2 Ch. E.	126 A, Box 4121	Salisbury, N. C.
Moorhead, W. M., Jr.	1 Ch. E.	10 8th, Box 3812	Kings Mountain, N. C.
Mordecai, G. W.	3 M. E.	Route 1	Raleigh, N. C.
Morgan, J. A.	1 M. E.	Y. M. C. A.	Andrews, N. C.
Morgan, J. O.	1 M. E.	313 9th, Box 4333	Badin, N. C.
Morgan, J. P., Jr.	1 Ag. Ed.	124 7th, Box 3324	Shawboro, N. C.
Morgan, J. W.	3 Ch. E.	1720 Hillsboro St.	Albemarle, N. C.
Morgan, P. H.	4 Tex.	4 Ferndell Lane	Shawboro, N. C.
Morgan, R. T.	4 Tex.	2114 White Oak Rd.	Raleigh, N. C.
Morgan, S. V.	1 Ag.	205 A, Box 4137	Richfield, N. C.
Morgan, T. M.	2 Ch. E.	12½ Horne St.	Charlotte, N. C.
Morris, Edwin	1 Tex.	11 Field House	Hillside, N. J.
Morris, M. B.	3 Ag.	201 5th, Box 3213	Apex, N. C.
Morrison, F. D.	3 Ag.	107 6th, Box 3243	Sewickley, Pa.
Morrison, N. A., Jr.	1 Ag. Ed.	130 Woodburn Rd.	Roseboro, N. C.
Morrison, W. D.	1 Aero.	Y. M. C. A.	Chapel Hill, N. C.
Morrow, V. A.	2 Cer.	2413 Clark Ave.	Mebane, N. C.

Name	*Classification*	*School Address*	*Home Address*
Morton, Dorothy L.	1 Aero.	106 Horne St.	Greensboro, N. C.
Moseley, T. V.	1 Aero.	1 8th, Box 3803	Kinston, N. C.
Moseley, Z. V., Jr.	2 E. E.	21 Enterprise St.	Kinston, N. C.
Moser, H. T.	2 Tex.	106 South, Box 3506	Burlington, N. C.
Moser, W. D.	1 Tex.	301 9th, Box 4321	Burlington, N. C.
Moss, Dan	5 Tex.	2804 Hillsboro St.	Chattanooga, Tenn.
Moss, R. S.	4 Ag.	105 C, Box 4204	New York, N.Y.
Motzno, J. D.	1 E. E.	120 Woodburn Rd.	Woodland, N.C.
Moxley, H. P.	1 Ag. Ed.	211 9th, Box 4318	Sparta, N. C.
Mulhall, J. H., Jr.	3 For.	215 Park Ave.	Brooklyn, N. Y.
Muller, H. S., Jr.	4 For.	21 South, Box 3617	Aberdeen, Md.
Mulrooney, E. A.	1 M. E.	210 7th, Box 3342	Wilmington, Del.
Munford, G. W.	1 Tex.	321 8th, Box 3789	Durham, N. C.
Murray, H. L.	1 Aero.	306 8th, Box 3774	Chester, S.C.
Muse, S. B., Jr.,	2 E. E.	204 6th, Box 3252	Charlotte, N. C.
Myers, F. L., Jr.	4 Ch. E.	123 Chamberlain St.	Asheville, N. C.
Myers, R. F.	4 Ag.	15 South, Box 3611	Laurel Springs, N. C.
Mynes, J. F.	5 E. E.	401 S. McDowell St., Apt 206,	Huntington, W. Va.
Nading, J. W.	1 Tex.	334 8th, Box 3802	Winston-Salem, N. C.
Nadjar, J. G.	1 Tex.	112 7th, Box 3312	Santiago, Chile
Nash, G. H., Jr.	1 Tex.	2407 Clark Ave	Weldon, N. C.
Nash, J. F. Jr.	4 Ag.	215 Park Ave.	St. Pauls, N. C.
Nassoff, Martin	1 C. E.	116½ Groveland Ave.	Brooklyn, N. Y.
Neal, W. M., Jr.	4 M. E.	2224 Hillsboro St.	Greensboro, N.C.
Neely, B. McL.	1 Tex.	223 7th, Box 3355	High Point, N. C.
Nelms, J. K.	4 M. E.	307 Wat., Box 3043	Oxford, N. C.
Nelson, H. L.	1 Ind. A.	106 South, Box 3506	Maryville, Tenn.
Nelson, Mary W.	5 Oc. Inf.	16 Enterprise St.	Raleigh, N. C.
Nery, R. J.	1 Ch. E.	113 7th, Box 3313	Lawrence, Mass.
Neumann, M. T.	1 Ch. E.	219 8th, Box 3753	Plainfield, N. J.
Newell, R. W.	1 Ch. E.	210 9th, Box 4317	Reidsville, N. C.
Newsom, R. W.	3 I. E.	125 Woodburn Rd.	Winston-Salem, N. C.
Newsome, J. C.	2 E. E.	Wake Forest	Wake Forest, N. C.
Newton, F. W.	4 Ag.	Box 5441, Raleigh	Henderson, N. C.
Nichols, B. C.	5 Ag.	114 Horne St.	Knoxville, Tenn.
Nichols, C. F.	4 Ch. E.	204 Wat., Box 3022	Waynesville, N. C.
Nichols, L. D.	1 For.	8 Ferndell Lane	Fayetteville, N. C.
Nicholson, J. F.	4 I. E.	2004 Hillsboro St.	Raleigh, N. C.
Nicholson, W. M.	1 Ch. E.	103 10th, Box 4403	Winston-Salem, N. C.
Nickel, R. F.	I Aero.	Gym	Asheville, N. C.
Nicks, R. E.	3 Aero.	340 C, Box 4298	Elkin, N. C.
Nifong, G. F.	1 Aero.	2514 Clark Ave., Box 1445	Lexington, N. C.
Nifong, W. H.	1 E. E.	215 7th, Box 3347	Winston-Salem, N. C.
Nixon, H. C.	4 Tex.	207 Wat., Box 3025	Hertford, N. C.
Nixon, J. R., Jr.	4 Ch. E.	303 4th, Box 3129	Lincolnton, N. C.
Nobles, D. M.	3 Ag. Ed.	202 5th, Box 3214	Stokes, N. C.
Nobles, H. L.	1 Aero.	224 8th, Box 3758	Stokes, N. C.
Norment, C. M.	1 Tex.	111 Wat., Box 3011	Rowland, N. C.
Norris, T. A., Jr.	1 Tex.	405 W. Park Dr.	Raleigh, N. C.
Northcott, C. A., Jr.	1 Aero.	233 7th, Box 3365	Norfolk, Va.
Norwood, E. W., Jr.	4 Tex.	202 Wat., Box 3020	Beaufort, N. C.
Norwood, J. F.	2 Ch. E.	5 Maiden Lane	Mt. Airy, N.C.
Norwood, W. A.	1 Ch. E.	10 Enterprise St.	Paterson, N. J.
Noyes, W. B.	1 I. E.	1301 Hillsboro St.	Marion, N. C.
Nunn, M. D.	1 M. E.	123 South, Box 3523	Kinston, N. C.
Oakman, W. M.	1 Tex.	113 7th, Box 3313	Jamica, L. I., N. Y.
O'Brian, J. M.	5 Ag.	Tobacco Exp. Station	Oxford, N. C.
O'Brien, J. R.	1 Ch. E.	110 8th, Box 3710	Dunn, N. C.
Odell, J. K. P.	1 Tex.	227 8th, Box 3761	Concord, N. C.
Odham, J. W.	3 Ag. Ed.	227 A, Box 4156	Grifton, N. C.

Name	*Classification*	*School Address*	*Home Address*
Odom, C. T.	1 E. E.	133 7th, Box 3401	Norfolk, Va.
Oetgen, W. F., Jr.	3 Ch. E.	300 Horne St.	Savannah, Ga.
Ogburn, R. M.	1 Aero.	225 7th, Box 3357	Elkin, N. C.
Ogden, W. H.	3 For.	130 Woodburn Rd.	Knoxville, Tenn.
Oglesby, W. C.	1 Aero.	111 8th, Box 3711	Kinston, N. C.
Oldham, A. M.	4 Ag.	2316 Hillsboro St.	Durham, N. C.
Olive, B. F.	1 Ag.	Withdrew	New Hill, N. C.
Olive, Floyd	5 Ag.	1712 Park Dr.	Raleigh, N. C.
Olive, H. K.	3 Arch.	523 N. Bloodworth St.	Raleigh, N. C.
Olive, J. E.	1 Ag.	10 Field House	Apex, N. C.
Oliver, P. S.	2 Ag.	215 Park Ave.	Fairmont, N. C.
Olson, H. C.	5 Entom.	123 Brooks Ave.	Fargo, N. Dak.
Oranksky, Philip	4 Ag.	222 Park Ave.	Bronx, N. Y.
Orland, J. E., Jr.	3 Tex.	220 C, Box 4248	Kannapolis, N. C.
Orr, L. P.	4 C. E.		Washington, D. C.
Osborne, W. F., Jr.	2 M. E.	10 Enterprise St.	Sparta, N. C.
Otero, M. E.	1 C. E.	319 8th, Box 3787	San Turce, Puerto Rico
Ott, L. B., Jr.	1 Ch. E.	113 South, Box 3518	Lewisburg, W. Va.
Outlaw, L. B., Jr.	1 Ag.	209 A, Box 4139	Seven Springs, N. C.
Overman, D. T.	2 C. E.	333 A, Box 4195	Stantonsburg, N. C.
Owen, C. W., Jr.	2 M. E.	129 C, Box 4426	Washington, D. C.
Owens, E. B.	2 Aero.	208 Wat., Box 3026	Black Creek, N. C.
Owens, F. A., Jr.	4 Tex.	239 A, Box 4165	Charlotte, N. C.
Packard, H. D.	3 For.	307 5th, Box 3221	Paoli, Pa.
Padgett, C. B.	4 Ag. Ed.	101 South, Box 3501	Ellenboro, N. C.
Padgett, E. G., Jr.	2 Arch.	2611 Lochmore Dr.	Raleigh, N. C.
Page, L. M.	2 M. E.	215 Wat., Box 3033	Stedman, N. C.
Page, P. D.	2 E. E.	109 6th, Box 3245	Fairmont, N. C.
Painter, C. C.	4 C. E.	2008 Hillsboro St.	Prospect Hill, N. C.
Palm, C. W.	3 Tex.	212 C, Box 4240	Newport, R. I.
Palmer, G. C., Jr.	4 Ag.	107 Wat., Box 3007	Clyde, N. C.
Palmer, J. H.	4 Ag.	107 Wat., Box 3007	Clyde, N. C.
Palmer, O. A., Jr.	1 E. E.	3401 Hillsboro St.	Raleigh, N. C.
Pamintuan, M. J.	3 Tex.	203 C, Box 4234	Davo City, Philippines
Panetti, J. M., III.	2 Ch. E.		Charlotte, N. C.
Pappas, N. C.	1 Aero.	208 7th, Box 3340	Laurinburg, N. C.
Paramore, R. L.	1 Ag.	122 7th, Box 3322	Grimesland, N. C.
Parentini, R. J.	2 Ag.	127 C, Box 4224	Cliffside Park, N. J.
Park, J. E.	2 M. E.	103 Chamberlain St.	Charlotte, N. C.
Parker, A. O.	2 Ch. E.	113 South, Box 3513	Jackson, N. C.
Parker, C. W.	2 E. E.	335 C, Box 4295	Salisbury, N. C.
Parker, G. R.	2 E. E.	111 C, Box 4208	Tyner, N. C.
Parker, J. H.	4 Ag. Ed.	124 South, Box 3524	Clinton, N. C.
Parker, P. G., Jr.	1 Tex.	129 A, Box 4124	Erwin, N. C.
Parker, R. H., Jr.	1 Aero.	119 8th, Box 3719	Charlotte, N. C.
Parker, T. J.	1 E. E.	208 Ashe Ave.	Charlotte, N. C.
Parker, W. F.	5 Ag.	4 Maiden Lane	Gibson, N. C.
Parker, W. M.	1 Ag.	302 8th, Box 3770	Enfield, N. C.
Parks, W. R.	2 Aero.	206 South, Box 3538	Lenoir, N. C.
Parnell, E. F.	3 I. E.	4 Ferndell Lane	Charlotte, N. C.
Parramore, D. G.	2 For.	205 Chamberlain St.	Winton, N. C.
Parrish, E. G.	1 M. E.	6 9th, Box 4339	Below Creek, N. C.
Parrish, M. R.,	1 C. E.	2220 Hillsboro St.	Nashville, N. C.
Parrish, W. C.	1 M. E.	126 C, Box 4223	Greenville, N. C.
Partin, C. A.	1 Ag.	2 South, Box 3598	Louisburg, N. C.
Partlow, J. E.	3 Cer.	222 C, Box 4250	Oak Hill, Ohio
Paschal, B. E., Jr.	4 Cer.	217 Wat., Box 3035	Charlotte, N. C.
Paschal, F. J.	3 Ch. E.	240 C, Box 4265	Goldston, N. C.
Pate, J. R.	4 Ag.	215 Park Ave.	Rowland, N. C.
Pate, Rudolph	3 Ag. Ed.	207 4th, Box 3125	Lumberton, N. C.
Pate, R. L., Jr.	3 Ag.	305 A, Box 4171	Erwin, N. C.

Name	*Classification*	*School Address*	*Home Address*
Patelos, S. N.	1 Ch. E.	104 8th, Box 3704	Wilmington, N. C.
Patten, S. H.	3 Ch. E.	134 Woodburn Rd.	Louisburg, N. C.
Patterson, B. T.	1 Ch. E.	Y. M. C. A.	Morrisville, Pa.
Patterson, C. S., Jr.	1 Tex.	11 Field House	Cranford, N. J.
Patterson, J. W.	1 Tex.	6 Ferndell Lane	Rockingham, N. C.
Patterson, Q. W.	4 Ag.	317 A, Box 4180	Hiddenite, N. C.
Patton, A. J.	1 Aero.	27 7th, Box 3327	Franklin, N. C.
Patton, C. B.	1 C. E.	312 8th, Box 3780	Jonesboro, N. C.
Patton, M. S.	3 Ag.	1 South, Box 3597	Franklin, N. C.
Patton, T. E.	3 Ch. E.	131 Hawthorne Rd.	Asheville, N. C.
Paul, G. M., Jr.	2 Aero.	115 Woodburn Rd.	Beaufort, N. C.
Paulus, C. J., III	2 Aero.	316 A, Box 4179	Yeadon, Pa.
Pawlak, W. J.	2 Tex.	23 8th, Box 3824	New Kensington, Pa.
Paysour, L. E., Jr.	2 E. E.	111 Wat., Box 3011	Mooresville, N. C.
Peacock, F. W.	2 Aero.	304 A, Box 4170	Asheville, N. C.
Pearce, Fred	1 Aero.	Y. M. C. A.	Greensboro, N. C.
Pearce, T. H.	2 For.	10 Enterprise St.	Franklinton, N. C.
Pearsall, J. S.	4 Ch. E.	315 Wat., Box 3051	Rocky Point, N. C.
Pearson, W. S.	4 Tex.	315 South, Box 3579	Charlotte, N. C.
Pease, J. N., Jr.	2 Arch.	331 South, Box 3578	Charlotte, N. C.
Peck, Benjamin	1 Aero.	309 7th, Box 3375	New Rochelle, N. Y.
Pedone, V. S.	1 M. E.	2004 Hillsboro St.	Mt. Vernon, N. Y.
Peebles, E. D.	1 M. E.	814 Wake Forest Rd.	Raleigh, N. C.
Peele, Eunice B.	2 Tex.	318 C, Box 4280	Bailey, N. C.
Peele, J. H.	4 Ch. E.	103 Chamberlain St.	Belhaven, N. C.
Peeler, C. M., Jr.	1 Ag.	234 8th, Box 3768	Shelby, N. C.
Peeples, R. C.	5 Entom.	123 Brooks Ave.	Tauares, Fla.
Pelletier, L. W., Jr.	3 Tex.	16 Horne St.	Stella, N. C.
Pendleton, A. L., Jr.	1 Aero.	219 South, Box 3551	Elizabeth City, N.C.
Pendleton, G. E.	1 Ag.	114 7th, Box 3314	Scotland Neck, N. C.
Penland, B. W.	2 Ch. E.	3 Maiden Lane	Asheville, N. C.
Penland, J. R.	2 E. E.	314 South, Box 3578	Weaverville, N. C.
Pennington, R. B.	3 Ch. E.	3208 Clark Ave.	Nathan's Creek, N. C.
Penny, Lura M.	5 Oc. Inf.	Route 1	Raleigh, N. C.
Penny, J. M.	1 Ag. Ed.	Route 5	Durham, N. C.
Penny, R. G.	2 Ag.	222 Park Ave.	Angier, N. C.
Percival, R. H.	1 Aero.	201 10th, Box 4410	Charlotte, N. C.
Pereda, E. F.	3 Engr.	307 4th, Box 3133	Juncos, Puerto Rico
Perkinson, J. L.	1 Ag. Ed.	124 C, Box 4221	Norlina, N. C.
Perman, Bernard	3 Ch. E.	322 South, Box 3586	Warrenton, N. C.
Perry, A. N.	1 Ch. E.	124 8th, Box 3724	Hamlet, N. C.
Perry, C. D.	1 C. E.	Withdrew	Raleigh, N. C.
Perry, J. L.	1 Ag.	105 6th, Box 3241	Cofield, N. C.
Perry, L. B.	1 E. E.	204 8th, Box 3738	Charlotte, N. C.
Perry, M. C.	2 Ch. E.	2405 Clark Ave.	Hamlet, N. C.
Perry, W. J.	3 E. E.	105 6th, Box 3241	Cofield, N. C.
Perry, W. N.	1 Aero.	105 N. Boylan Ave.	Raleigh, N. C.
Person, M. M., Jr.	1 Ag.	2306 Hillsboro St.	Louisburg, N. C.
Petteway, S. B.	1 E. E.	317 8th, Box 3785	Kinston, N. C.
Pharr, J. M.	2 Ch. E.	21 Enterprise St.	Concord, N. C.
Phillips, F. C., Jr.	2 Aero.	335 A, Box 4196	Burlington, N. C.
Phillips, K. L.	4 Ag.	23 8th, Box 3824	Maysville, Ky.
Phillips, P. B.	2 Arch. E.	312 South, Box 3573	Durham, N. C.
Phillips, R. E.	1 Engr.	5 8th, Box 3807	Macclesfield, N. C.
Phillips, R. M.	1 Ch. E.	24 8th, Box 3825	Charlotte, N. C.
Phrydas, P. A.	4 E. E.	2004 Hillsboro St.	Greensboro, N. C.
Pickler, M. J.	1 Ag.	205 7th, Box 3337	New London, N. C.
Pierce, R. A.	1 Ch. E.	4 Ferndell Lane	Charlotte, N. C.
Pieri, R. L.	1 Ag.	Field House	Washington, D. C.
Pinner, Jack	2 E. E.	127 C, Box 4224	W. New York, N. J.
Pinsky, Herbert	1 Ag.	Withdrew	Camden, N. J.

Name	*Classification*	*School Address*	*Home Address*
Pisano, J. L.	1 Ind. A.	103 7th, Box 3303	Agawam, Mass.
Pittman, W. T.	1 Ch. E.	5 8th, Box 3807	Rocky Mount, N. C.
Pleasants, R. J.	4 Ag.	105 South, Box 3508	Cary, N. C.
Plummer, J. S., Jr.	E. E.	325 C, Box 4287	Raleigh, N. C.
Poe, H. V.	1 E. E.	229 8th, Box 3763	Apex, N. C.
Pollock, J. H.	3 Ag. Ed.	308 5th, Box 3232	Trenton, N. C.
Pomeranz, R. E.	3 M. E.	205 6th, Box 3253. Far	Rockaway, L. I., N. Y.
Ponos, N. J.	3 Ch. E.	307 C, Box 4271	Wilmington, N. C.
Ponton, D. R., Jr.	1 Tex.	214 Forest Rd.	Raleigh, N. C.
Poole, R. B.	1 E. E.	203 10th, Box 4412	Greensboro, N. C.
Poole, S. F.	1 For.	205 10th, Box 4414	Greensboro, N. C.
Porter, R. E.	4 C. E.	1710 Park Dr.	Charlotte, N. C.
Poteet, G. E.	2 Aero.	2226 Hillsboro St.	Sylva, N. C.
Pou, J. E.	2 Ch. E.	2306 Hillsboro St.	Ponce, Puerto Rico
Powell, C. V.	1 Ag.	303 A, Box 4169	Corapeake, N. C.
Powell, E. C.	1 C. E.	123 7th, Box 3323	Canton, N. C.
Powell, H. C.	1 M. E.	103 A, Box 4103	Ruffin, N. C.
Powell, J. C., Jr.	1 Aero.	6 Ferndell Ave.	Winston-Salem, N. C.
Powers, L. E.	1 E. E.	111 7th, Box 3311	Rutherfordton, N. C.
Powers, R. M.	1 Aero.	209 8th, Box 3743	Moyock, N. C.
Pratt, A. M.	3 Ag.	Greenhouse, Box 5254	Draper, N. C.
Pratt, G. H.	3 Ind. E.	2004 Hillsboro St.	Arlington, Mass.
Pratt, T. B., Jr.	2 Ch. E.	305 C, Box 4270	Winston-Salem, N. C.
Price, E. M.	3 Ag. Ed.	102 Wat., Box 3002	Forest City, N. C.
Prim, G. C.	2 Ag.	103 6th, Box 3239	Yadkinville, N. C.
Pritchard, T. B., Jr.	1 Ch. E.	12½ Horne St.	Chapel Hill, N. C.
Procter, B. G.	2 M. E.	339 C, Box 4298	Durham, N. C.
Proctor, E. K., IV	3 E. E.	210 5th, Box 3222	Whiteville, N. C.
Proctor, W. L., Jr.	1 E. E.	118 8th, Box 3718	Durham, N. C.
Propst, D. E.	4 Ag. Ed.	112 Cox Ave.	Belwood, N. C.
Pruden, B. V.	3 M. E.	231 South	Margarettsville, N. C.
Pruitt, A. A.	4 For.	21 South, Box 3617	Carteret, N. J.
Pruitt, T. P., Jr.	2 Tex.	2408 Everett Ave.	Hickory, N. C.
Pulliam, G. W., Jr.	1 Tex.	23 Shepherd St.	Roxboro, N. C.
Purcell, T. H., Jr.	3 Aero.	1620 Hillsboro St.	Ettrick, Va.
Purlson, E. H.	1 Ag.	220 8th, Box 3754	Verona, N. J.
Quay, T. L.	5 Ag.	2805 Bedford Ave.	Raleigh, N. C.
Quickel, W. A.	4 Arch. E.	1720 Hillsboro St.	Lincolnton, N. C.
Quinn, F. D., Jr.	4 Tex.	201 Wat., Box 3019	Shelby, N. C.
Rabey, E. A.	1 Arch.	219 7th, Box 3351	Savannah, Ga.
Rabon, J. R.	1 Ag. Ed.	3 9th, Box 4336	Leland, N. C.
Rainey, R. W.	3 Aero.	21 Enterprise St.	Fayetteville, N. C.
Ramseur, W. F.	2 Ag. Ed.	117 A, Box 4114	Morganton, N. C.
Ramsey, A. L.	3 Ag.	5 South, Box 3601	Franklin, N. C.
Rand, W. N.	1 Aero.	11 8th, Box 3813	Richlands, N. C.
Randolph, J. L.	4 Aero.	212 Groveland Ave.	Morganton, N. C.
Ranes, W. C., Jr.	3 E. E.	203 South, Box 3535	Tarboro, N. C.
Raney, M. T.	3 I. E.	205 Wat., Box 3023	La Crosse, Va.
Rankin, S. A.	1 Aero.	233 8th, Box 3767	Gastonia, N. C.
Raper, D. G.	1 Ag.	205 9th, Box 4312	Wilson, N. C.
Ratchford, C. B.	4 Ag.	201 4th	Gastonia, N. C.
Ratcliff, Z. O.	3 Ag.	211 6th, Box 5923	Pantego, N. C.
Ratts, J. L.	1 E. E.	A 9th, Box 4344	Fayetteville, N. C.
Rawls, H. D.	3 Oc. Inf.	3209 Circle Dr.	Raleigh, N. C.
Ray, J. F.	1 E. E.	Power Plant, Box 5241	Hillsboro, N. C.
Ray, P. D.	1 Tex.	120 A, Box 4116	Asheville, N. C.
Ray, W. F.	1 Engr.	212 8th, Box 3746	Tampa, Fla.
Reams, G. E.	4 Ag. Ed.	13 South, Box 3609	Apex, N. C.
Reavis, C. B.	1 Aero.	129 8th, Box 3729	Henderson, N.C.
Rector, R. E.	1 Aero.	115 Woodburn Rd.	Murphy, N. C.
Redmon, T. P.	2 Ch. E.	127 A, Box 4122	Cleveland, N. C.

Name	*Classification*	*School Address*	*Home Address*
Reece, E. C., Jr.	1 M. E.	326 C, Box 4288	Winston-Salem, N. C.
Reece, J. D.	1 E. E.	105 8th, Box 3705	New Bern, N. C.
Reece, J. R.	1 Engr.	334 8th, Box 3802	Winston-Salem, N. C.
Reed, R. L.	4 C. E.	Gym	Hertford, N. C.
Reep, L. J.	1 Ag.	2408 Stafford Ave.	Lincolnton, N. C.
Reese, A. L., Jr.	1 Ag.	Y. M. C. A.	Reese, N. C.
Reeves, J. C.	1 Ch. E.	228 E. Park Dr.	Raleigh, N. C.
Regan, P. R.	4 Ag. Ed.	201 5th, Box 3213	Lexington, N. C.
Rehder, G. S.	2 Ag.	221 South, Box 3553	Wilmington, N. C.
Reid, D. W.	1 Ch. E.	101 10th, Box 4401	Winston Salem, N. C.
Reid, G. D.	1 M. E.	210 7th, Box 3342	Savannah, Ga.
Reid, H. A.	3 Ag.	323 South, Box 3587	Elizabeth City, N. C.
Reid, J. D.	1 Aero.	2 Gym.	High Point, N. C.
Reid, R. W.	1 Aero.	328 8th, Box 3796	Thomasville, N. C.
Reisenauer, H. M.	5 Soils	4th, Box 3115	Genesee, Idaho
Rembert, A. G.	1 Ch. E.	1301 Hillsboro St.	Sarasota, Fla.
Rennie, J. N.	2 Ch. E.	117 South, Box 3517	Whitakers, N. C.
Reynolds, C. R.	1 Ag.	510 Cutler St.	Raleigh, N. C.
Reynolds, D. R.	4 Ag. Ed.	114 South, Box 3514	Jamestown, N. C.
Reynolds, F. H. K., Jr.	3 M. E.	4 Ferndell Lane	San Antonio, Tex.
Reynolds, R. B.	2 Ch. E.	1420 Park Dr.	Raleigh, N. C.
Reynolds, T. M.	2 Ag. Ed.	1715 Park Dr.	Columbia, N. C.
Reynolds, V. H.	3 Ag.	302 A, Box 4168	Kinston, N. C.
Rhodarmer, R. K.	1 Aero.	206 Chamberlain St.	Canton, N. C.
Rhodes, A. B., Jr.	1 M. E.	209 10th, Box 4418	Wilmington, N. C.
Rhodes, J. H.	1 Engr.	218 8th, Box 3752	W. Hartford, Conn.
Rhodes, M. K.	1 E. E.	316 7th	Waterbury, Conn.
Rhyne, A. M.	4 M. E.	328 South, Box 3592	Stanley, N. C.
Rhyne, C. T., Jr.	3 Arch. E.	135 C, Box 4230	Newport, Tenn.
Rhyne, J. L.	1 Tex.	135 A, Box 4128	Lincolnton, N. C.
Rhyne, R. H.	1 Ag.	19 8th, Box 3820	Sherrill's Ford, N. C.
Rice, G. B.	1 Aero.	310 8th, Box 3778	Reidsville, N. C.
Rich, C. J., Jr.	1 Aero.	2202 Hillsboro St.	Jefferson, N. C.
Richardson, R. C.	1 Tex.	1913 Alexander Rd.	Raleigh, N. C.
Richardson, W. C.	4 Ag.	10 Enterprise St.	Sparta, N. C.
Richey, H. L., Jr.	3 Ag.	204 South, Box 3536	Camden, S. C.
Riddick, R. G.	4 Ag. Ed.	22 South, Box 3618	Corapeake, N. C.
Riddle, C. H., Jr.	2 Engr.	109 South, Box 3095	Sanford, N. C.
Riddle, T. L., Jr.	1 Tex.	7 Field House, Box 5173	Sanford, N. C.
Riegert, R. P.	1 Tex.	303 6th, Box 3263	Buena Vista, Va.
Riggs, J. R.	1 Ag.	2406 Hillsboro St.	Raleigh, N. C.
Rightmyer, R. J., Jr.	2 Aero.	304 C, Box 4269	Roanoke Rapids, N. C.
Riley, B. A.	3 Aero.	2513 Clark Ave.	Fayetteville, N. C.
Riley, Rupert	4 Tex.	119 Montgomery St.	Raleigh, N. C.
Risley, R. S.	4 E. E.	2221 Creston Rd.	Raleigh, N. C.
Ritchie, James, Jr.	1 E. E.	3 Gym.	Pores Knob, N. C.
Ritchie, J. C.	1 C. E.	216 7th, Box 3348	Salisbury, N. C.
Rives, A. R.	1 Aero.	106 10th, Box 4406	Jonesboro, N. C.
Robbins, T. J.	2 Ag.	126 South, Box 3526	Burgaw, N. C.
Robbins, W. D.	4 Ag.	127 South, Box 3527	Burgaw, N. C.
Roberson, C. T.	1 Ch. E.	134 C, Box 4229	Williamston, N. C.
Roberts, C. M.	2 Tex.	110 C	Salisbury, N. C.
Roberts, E. H., Jr.	1 Aero.	705 W. North St.	Raleigh, N. C.
Roberts, S. D.	2 M. E.	201 A, Box 4133	Winston-Salem, N. C.
Roberts, W. J.	4 Ch. E.	318 South, Box 3582	Monroe, N. C.
Robertson, A. K.	3 Engr.	140 A, Box 4132	Goldsboro, N. C.
Robertson, H. N.	3 Ag.	14 South, Box 3610	Knightdale, N. C.
Robinson, C. M.	2 Tex.	21 Enterprise St.	Lowell, N. C.
Robinson, Emma Mae	1 Ag.	311 Calvin Rd.	Cary, N. C.
Robinson, H. F.	5 Ag.	114 Horne St.	Raleigh, N. C.
Robinson, J. L., Jr.	1 E. E.	5 9th, Box 4338	Arlington, Va.

Name	*Classification*	*School Address*	*Home Address*
Robinson, R. B., Jr.	3 Ag.	2316 Hillsboro St.	Littleton, N. C.
Robinson, W. D.	2 Ag. Ed.	225 South, Box 3557	Maiden, N. C.
Roe, J. B.	1 Arch. E.	210 10th, Box 4419	Sturgills, N. C.
Rogers, F. W.	3 Ch. E.	2305 Clark Ave., Box 5341	Asheville, N. C.
Rogers, J. P.	1 Arch. E.	128 8th, Box 3728	Smithfield, N. C.
Root, B. H.	3 Ag.	2402 Everett Ave.	East Orange, N. J.
Rose, B. L.	2 Ch. E.	2407 Clarke Ave.	Wadesboro, N. C.
Rose, D .A.	1 Ag.	609 St. Mary's St.	Norlina, N. C.
Rose, G. A., III	3 Ch. E.	1301 Hillsboro St.	Henderson, N. C.
Rose. J. A., IV	1 Arch.	302 9th, Box 4322	Durham, N. C.
Rose, J. T., Jr.	4 Ch. E.	305 South, Box 3569	Rocky Mount, N. C.
Rose, R. W.	1 Aero.	204 10th, Box 4413	Durham, N. C.
Rosemund, G. W.	1 For.	102 C, Box 4201	Woodport, N. J.
Rosenberg, Jacques	1 Tex.	101 7th, Box 3301	New York, N. Y.
Rosenfield, H. M.	3 Aero.	312 South, Box 3576	New York, N. Y.
Ross, J. P.	1 Engr.	109 10th, Box 4409	Charlotte, N. C.
Ross, R. G., Jr.	2 Engr.	315 A, Box 4178	Charlotte, N. C.
Roth, J. S.	1 Tex.	207 7th, Box 3339	Brooklyn, N. Y.
Rothberg, Maurice	5 R. S.	203 4th	Melbourne, V. C., Australia
Rothstein, H. L.	1 Tex.	212 7th, Box 3344	New York, N. Y.
Rouse, R. N.	1 C. E.	204 10th, Box 4413	Goldsboro, N. C.
Rowe, J. H., Jr.	1 M. E.	4 8th, Box 3806	Salisbury, N. C.
Rowell, J. O.	5 Entom.	Box 5143	Marion, S. C.
Royall, D. C.	1 M. E.	305 8th, Box 3773	Thurmond, N. C.
Ruark, C. S.	4 Ch. E.	318 South, Box 3582	Wilmington, N. C.
Rubinton, J. E.	1 Aero.	203 8th, Box 3737	Brooklyn, N. Y.
Rudisill, J. A., Jr.	3 E. E.	300 Horne St.	Charlotte, N. C.
Rue, C. V.	3 Cer.	1307 Mordecai Dr.	Raleigh, N. C.
Rugh, F. A., Jr.	1 Cer.	126 7th, Box 3326	Jeannette, Pa.
Rumple, W. G., Jr.	1 Tex.	328 7th, Box 3391	Concord, N. C.
Russ, J. R., Jr.	1 Tex.	125 A, Box 4120	Washington, N. C.
Russell, R. W.	2 Aero.	1905 Park Dr.	Kinston, N. C.
Ryman, J. J.	3 Engr.	17 Enterprise St.	Skyland, N. C.
Sadler, J. T., Jr.	1 Arch.	112 8th, Box 3712	Tarboro, N. C.
Saint-Amand, Robert	1 Arch. E.	126 C, Box 4223	Wilmington, N. C.
Saleeby, E. C.	1 Aero.	207 10th, Box 4416	Wilson, N. C.
Salisbury, R. M.	2 Tex.	14 Horne St.	Scotland Neck, N. C.
Sampson, J. E.	3 Tex.	223 C, Box 4251	Guilford College, N. C.
Sanderson, J. E.	1 Ag.	209 A, Box 4139	Four Oaks, N. C.
Santopolo, F. A.	4 For.	215 Park Ave.	Mt. Vernon, N. Y.
Santore, G. L.	3 Cer.	2004 Hillsboro St.	Hasbrouck Heights, N. J.
Sapp, D. F.	2 Tex.	224 A, Box 4153	Concord, N. C.
Sarandria, T. J.	4 Tex.	202 A, Box 4134	W. New York, N. Y.
Sasser, C. W.	4 M. E.	207 South, Box 3539	Wilson, N. C.
Sasser, J. N.	3 Ag. Ed.	Route 2, Raleigh, N. C.	Goldsboro, N. C.
Sasser, M. C.	1 E. E.	305 7th, Box 3371	Selma, N. C.
Sauls, H. A., Jr.	2 Tex.	2407 Clark Ave.	Winston-Salem, N. C.
Saunders, G. L.	1 Ch. E.	123 7th, Box 3323	Canton, N. C.
Saunders, R. R., Jr.	4 Ch. E.	118 A, Box 4115	Reidsville, N. C.
Sawyer, W. R.	1 Ind. A.	109 South, Box 3509	Greensboro, N. C.
Sayah, Max	3 Ch. E.	226 South, Box 3558	Allentown, Pa.
Sayre, E. H.	3 For.	2004 Hillsboro St.	Tryon, N. C.
Schell, S. C.	5 Entom.	2716 Everett Ave.	York, Pa.
Schenck, J. F., III	2 Tex.	118 Wat., Box 3018	Shelby, N. C.
Scherr, H. M.	2 Tex.	226 A, Box 4155	Asheville, N. C.
Schmidt, F. H.	4 Flori.	516 Daughtridge St.	Raleigh, N. C.
Schmidt, R. P.	1 Ch. E.	516 Daughtridge St.	Raleigh, N. C.
Schreyer, C. E., Jr.	2 For.	131 C, Box 4227	Mamaroneck, N. Y.
Schubart, C. S.	3 Ag.	2004 Hillsboro St.	Maplewood, N. J.
Schultz, E. F., Jr.	5 Ag.	6 Enterprise St.	Citronelle, Ala.
Schwartz, H. K.	1 Tex.	120 8th, Box 3720	Charlotte, N. C.

Name	*Classification*	*School Address*	*Home Address*
Schwartz, S. C.	1 Tex.	219 8th, Box 3753	Baltimore, Md.
Scoggins, H. D.	3 Tex.	201 C, Box 4232	Wilmington, N. C.
Scott, C. C., Jr.	4 Ag.	101 5th, Box 3240	Mars Hill, N. C.
Scott, H. C.	4 Ag.	112 5th, Box 3212	Kenly, N. C.
Scott, J. W., Jr.	2 Aero.	125 C, Box 4222	Warrenton, N. C.
Seagraves, W. P.	Auditor	402 Horne St.	Raleigh, N. C.
Seals, R. K.	3 C. E.	319 South, Box 3583	Bridgewater, N. C.
Seatz, L. F.	5 Ag.	114 Horne St.	Winchester, Idaho
Seawell, W. D.	3 Tex.	103 Chamberlain St.	Greensboro, N. C.
Sedberry, G. R.	4 Tex.	216 South, Box 3548	Concord, N. C.
Seegars, N. W.	4 Ag.	105 South, Box 3508	Fairfield, N. C.
Seifart, Arno	2 I. E.	104 Logan Court	Charlotte, N. C.
Seligson, Arnold	1 Aero.	204 7th, Box 3336	New York, N. Y.
Sellers, W. H.	3 Ag. Ed.	304 6th, Box 3264	Kings Mountain, N. C.
Sellers, W. T.	1 Aero.	3 Maiden Lane	Shallotte, N. C.
Semanik, J. M., Jr.	3 Tex.	227 C, Box 4255	Troy, N. Y.
Senn, R. M., Jr.	1 Aero.	214 8th, Box 3748	Charlotte, N. C.
Senter, R. L.	2 I. E.	26 Dixie Trail	Raleigh, N. C.
Setzer, C. M., Jr.	3 M. E.	1720 Hillsboro St.	Charlotte, N. C.
Setzer, J. W.	1 Ch. E.	215 A, Box 4144	Maiden, N. C.
Sevilla, A. L.	4 Cer.	925 Hillsboro St.	Manila, Philippines
Sewell, H. B., Jr.	2 Engr.	Gym.	Greensboro, N. C.
Seyter, W. G.	4 E. E.	2209½ Hope St.	Union City, N. J.
Shadrach, L. T.	1 Ag.	6 Field House	Apex, N. C.
Shafer, C. B.	2 I. E.	337 C, Box 4296	Chevy Chase, Ind.
Sharpe, E. E.	1 Aero.	218 7th, Box 3350	Burlington, N. C.
Sharpe, H. T.	2 Ch. E.	101 A, Box 4101	Newton, N. C.
Sharpe, J. J.	1 M. E.	117 8th, Box 3717	Spencer, N. C.
Sharpe, W. E.	1 Tex.	106 8th, Box 3722	Siler City, N. C.
Shaw, Warren Cleaton	2 Ag. Ed.	2202 Hillsboro St.	Roanoke Rapids, N. C.
Shaw, William Cox	4 Ag. Ed.	17 South, Box 3613	Richlands, N. C.
Shearin, G. L.	2 Ag. Ed.	309 6th	Littleton, N. C.
Shearin, M. F.	1 Ag.	Dairy, Box 5127	Rocky Mount, N. C.
Sheets, C. H.	3 Ch. E.	207 C, Box 4237	Salisbury, N. C.
Shelburne, V. B., Jr.	3 Ch. E.	207 6th, Box 3255	Washington, N. C.
Shelden, J. R.	1 E. E.	220 7th, Box 3352	Camp Forrest, Tenn.
Shelden, Rebecca E. J.	2 Tex.	2330 Fairview Rd.	Camp Forrest, Tenn.
Shelden, R. E. H.	3 C. E.	211 N. Blount St.	Shelbyville, Tenn.
Sherrill, H. H.	1 M. E.	332 8th, Box 3800	Winston-Salem, N. C.
Sherrill, P. E., Jr.	2 E. E.	206 Wat., Box 3024	Mooresville, N. C.
Shevchenko, R. P.	3 Aero.	217 C, Box 4245	Port Norris, N. J.
Shields, E. R.	2 Aero.	109 A, Box 4107	Scotland Neck, N. C.
Shinn, C. S.	2 Aero.	104 C, Box 4203	Spray, N. C.
Shinn, K. A., Jr.	4 Tex.	110 Wat., Box 3010	China Grove, N.C.
Shoaf, E. H.	3 E. E.	116 C, Box 4213	Charlotte, N. C.
Shoe, G. W.	4 Arch. E.	1313 Hillsboro St.	Greenville, N. C.
Shoffner, J. E.	3 Cer.	1623 Park Dr.	Raleigh, N. C.
Shoffner, R. W.	5 Ag.	307 1911	Julian, N. C.
Shook, W. B.	1 E. E.	614 Will Forest Rd.	Raleigh, N. C.
Shore, J. W., Jr.	1 Tex.	304 8th, Box 3772	Boonville, N. C.
Short, R. E.	3 C. E.	129 A, Box 4124	Prospect Park, Pa.
Shoub, J. L.	2 For.	203 6th	East Orange, N. J.
Showalter, M. R.	3 E. E.	2820 Barmettler St.	Raleigh, N. C.
Shubert, J. C.	1 Aero.	8 8th, Box 3810	Louisburg, N. C.
Shuford, E. M.	1 Aero.	234 7th, Box 3366	Fayetteville, N. C.
Shumaker, R. K.	3 Aero.	2008 Rilsboro Ave.	Philadelphia, Pa.
Sibert, J. B.	4 M. E.	210 Wat.	Winston-Salem, N. C.
Sickerott, C. D.	4 Tex.	2407 Clark Ave.	Siler City N. C.
Sides, B. E.	3 Tex.	227 C, Box 4255	Winston-Salem, N.C.
Sills, E. M.	3 Ch. E.	131 Hawthorne Rd.	Raleigh, N. C.
Silver, H. G.	1 Ag.	112 Cox Ave.	Bondona, N. C.

Name	*Classification*	*School Address*	*Home Address*
Silver, H. S.	2 Tex.	Midway Plantation	Raleigh, N. C.
Silverman, Norman	1 Tex.	210 8th, Box 3744	New York, N. Y.
Simerson, H. Y.	2 Tex.	119 South, Box 3519	Spencer, N. C.
Simmons, R. T.	2 Ch. E.	405 E. Jones St.	Stedman, N. C.
Simpson, D. L., Jr.	2 Aero.	207 A	Asheville, N. C.
Simpson, Mrs. Roxie C.	5 Entom.	701½ Glenwood Ave.	Wilmington, N. C.
Sineath, W. P.	1 Tex.	226 7th, Box 3358	Goldsboro, N. C.
Singer, J. L.	3 M. E.	130 South, Box 3530	New York, N. Y.
Sink, A. M.	3 Ag. Ed.	111 5th	Lexington, N. C.
Sink, K. A.	1 Ag. Ed.	338 A, Box 4198	Thomasville, N. C.
Sink, L. G., Jr.	2 Ag.	309 6th, Box 3269	Lexington, N. C.
Sites, A. M.	1 Tex.	203 Chamberlain St.	Chambersburg, Pa.
Sizemore, F. M.	1 Tex.	107 6th, Box 3243	Concord, N. C.
Skinner, B. A., Jr.	1 Aero.	202 10th, Box 4411	Charlotte, N. C.
Slack, G. M.	1 Ag.	212 A, Box 4141	Pinetown, N. C.
Slagle, C. S., Jr.	4 Ag.	5 South, Box 3127	Franklin, N. C.
Sloan, H. W.	2 M. E.	312 Chamberlain St.	Charlotte, N. C.
Sloop, A. M.	2 M. E.	220 C, Box 4248	Kannapolis, N. C.
Small, A. R.	3 M. E.	305 5th, Box 3229	Albemarle, N. C.
Smith, A. C.	1 Ch. E.	304 9th, Box 4324	Mooresville, N. C.
Smith, A. T.	1 Ag. Ed.	212 7th, Box 3344	Palmyra, N. C.
Smith, C. J.	1 M. E.	103 Chamberlain St.	Dunn, N. C.
Smith, E. C., Jr.	2 I. E.	313 C, Box 4275	Winston-Salem, N.C.
Smith, E. D., Jr.	1 M. E.	103 9th, Box 4303	Durham, N. C.
Smith, E. E.	1 Aero.	20 8th, Box 3821	W. Asheville, N. C.
Smith, G. A.	2 Ag.	1 South	Stony Point, N. C.
Smith, G. B.	2 Ch. E.	235 C, Box 4261	Winston-Salem, N. C.
Smith, G. H.	1 Ch. E.	227 7th, Box 3359	Gilkey, N. C.
Smith, Horace	1 E. E.	410 Elm St.	Raleigh, N. C.
Smith, H. B.	1 Ch. E.	6 Dixie Trail	Raleigh, N. C.
Smith, J. A.	3 Ag. Ed.	301 Park Ave.	Vass, N. C.
Smith, J. F.	4 Ch. E.	122 A, Box 4117	Avondale, N. C.
Smith, J. M.	4 C. E.	Box 5141	Raleigh, N. C.
Smith, J. T.	1 Aero.	320 7th, Box 3386	High Point, N. C.
Smith, Remus John	1 E. E.	215 8th, Box 3749	Hillsboro, N. C.
Smith, Rufus Jackson, Jr.	3 Cer.	225 C, Box 4253	Goldsboro, N. C.
Smith, R. S.	4 Arch E.	320 South, Box 3584	Asheville, N. C.
Smitherman, S. J.	1 Arch. E.	308 6th, Box 3268	Troy, N. C.
Smithwick, R. W., Jr.	2 Ch. E.	228 A, Box 4151	Louisburg, N. C.
Smoak, W. S.	1 M. E.	333 C, Box 4294	Wilkesboro, N. C.
Snapp, W. R., Jr.	2 M. E.	103 Chamberlain St.	Charlotte, N. C.
Snavely, H. C.	1 M. E.	332 8th, Box 3800	Winston-Salem, N. C.
Sneed, E. M.	2 Aero.	2633 Fairview Rd.	Raleigh, N. C.
Sneed, L. M., Jr.	1 Oc. Inf.	2633 Fairview Rd.	Raleigh, N. C.
Snow, G. P.	2 Aero.	Route 2	Raleigh, N. C.
Soady, E. D.	2 C. E.	317 South, Box 3581	Asheboro, N. C.
Sokoloff, M. H.	2 Tex.	327 C, Box 4289	Newark, N. J.
Solow, R. I.	1 For.	114 7th, Box 3314	Everett, Mass.
Somers, J. C.	1 Ag.	3 8th, Box 3805	Elon College, N. C.
Spain, F. H.	1 Ag.	129 8th, Box 3729	Henderson, N. C.
Spainhour, C. D.	3 M. E.	217 A, Box 4146	Greensboro, N. C.
Spargo, L. H., Jr.	4 E. E.	112 Wat., Box 3012	Charlotte, N. C.
Sparrow, T. B.	2 Tex.	2514 Clark Ave.	Greensboro, N. C.
Speairs, R. J., Jr.	5 Ag.	123 Brooks Ave.	Texarkana, Tex.
Speas, H. M.	4 Ag.	4 South, Box 3600	Winston-Salem, N. C.
Speight, P. T.	2 Ag.	230 C, Box 4258	Winterville, N. C.
Spencer, B. F.	4 E. E.	113 Wat., Box 3013	Ayden, N. C.
Spencer, B. F.	4 Ag.	107 5th, Box 3207	Scranton, N. C.
Spencer, B. L.	1 C. E.	3 Maiden Lane	Durham, N. C.
Speros, Gus	1 Aero.	320 7th, Box 3386	Maxton, N. C.
Sprague, Curtiss	1 Aero.	224 7th, Box 3356	Flushing, L. I., N. Y.

Name	*Classification*	*School Address*	*Home Address*
Springs, J. H.	1 Ch. E.	222 8th, Box 3756	Charlotte, N. C.
Spruill, A. C., Jr.	1 Aero.	118 South, Box 3518	Goldsboro, N. C.
Spruill, W. H.	3 M. E.	220 South, Box 3552	Oriental, N. C.
Sprung, I. J.	1 Ag.	2226 Hillsboro St.	New York, N. Y.
Stafford, J. K.	1 Ag.	123 C, Box 4220	Summerfield, N. C.
Staley, C. W.	2 Cer.	8 Ferndell Lane	Greensboro, N. C.
Stallings, J. W.	2 Ag.	327 A, Box 4190	Selma, N. C.
Stanford, W. T.	1 M. E.	306 6th, Box 3266	Charlotte, N. C.
Stanton, W. M.	1 Ag.	208 10th, Box 4417	Rowland, N. C.
Stansbury, H. C.	3 Ag.	121½ Enterprise St.	Yanceyville, N. C.
Stapleton, E. M.	1 Aero.	1309 Canterbury Rd.	Raleigh, N. C.
Starling, D. G.	1 Ag.	222 Cox Ave.	Autryville, N. C.
Starnes, B. F., Jr.	3 Ch. E.	6 Ferndell Lane	Monroe, N. C.
Staton, J. C.	1 Ag.	115 Woodburn Rd.	Morehead City, N. C.
Steele, C. H.	2 M. E.	323 C, Box 4285	Charlotte, N. C.
Steel, C. N.	2 Engr.	103 Chamberlain St.	Statesville, N. C.
Steele, F. M.	2 Cer.	103 Chamberlain St.	Winston-Salem, N. C.
Steele, G. R., Jr.	2 E. E.	329 C, Box 4291	Charlotte, N. C.
Steele, W. P.	1 Cer.	118 8th, Box 3718	Winston-Salem, N. C.
Steelman, C. H., Jr.	5 Pom.	108 4th, Box 3118	Kingston, N. J.
Stein, H. M.	2 Ag. Ed.	227 A, Box 4156	Newark, N. J.
Steinberger, A. M.	1 Tex.	204 9th, Box 4311	Bronx, N. Y.
Steiner, B. S., Jr.	1 Ag.	116 South, Box 3516	Washington, D. C.
Stephenoff, M. S., Jr.	3 C. E.	231 C, Box 4259	Freeport, N. Y.
Stephens, J. V., Jr.	1 M. E.	A 9th, Box 4345	New Bern, N. C.
Stevens, G. B.	1 E. E.	311 9th, Box 4331	Mooresville, N. C.
Stevens, J. E.	1 M. E.	1907 Alexander Rd.	Raleigh, N. C.
Stevens, R. B., Jr.	4 M. E.	212 South, Box 3544	Camden, N. C.
Stevens, R. W.	2 Oc. Inf.	232 7th, Box 3364	Jobit, Ill.
Stewart, C. P.	1 Ag. Ed.	314 A, Box 4177	Broadway, N. C.
Stewart, E. L., Jr.	2 Ind. A.	310 Wat., Box 3049	Roxboro, N. C.
Stewart, J. M.	1 Tex.	201 7th, Box 3333	Riverside, Conn.
Stewart, M. B.	1 Aero.	129 7th, Box 3329	Statesville, N. C.
Stiles, D. J.	2 Tex.	331 A, Box 4194	Stafford, Conn.
Stilwell, M. L.	3 Tex.	233 A, Box 4161	Thomasville, N.C.
Stinson, H. E.	1 Ag. Ed.	304 8th, Box 3772	Boonville, N. C.
Stockard, H. J., Jr.	3 Engr.	705 Hillsboro St.	Raleigh, N. C.
Stokes, J. A., Jr.	1 M. E.	207 8th, Box 3741	Charlotte, N. C.
Stone, J. R., Jr.	2 E. E.	325 A, Box 4188	Durham, N.C.
Stout, P. E.	4 C. E.	115 Chamberlain St.	High Point, N. C.
Stout, P. E.	1 Tex.	304 C, Box 4269	Sanford, N. C.
Stover, D. B.	1 For.	229 7th, Box 3361	Richmond, Va.
Stover, J. D.	1 Tex.	4 Field House	Scarbro, W. Va.
Strait, J. H.	4 Tex.	6 Ferndell Lane	Columbia, S. C.
Strand, H. V.	4 E. E.	230 E. Park Dr.	Norge, Va.
Strauss, H. C.	1 Engr.	313 7th, Box 3379	Winston-Salem, N. C.
Strauss, Ira, Jr.	1 Tex.	121 7th, Box 3321	Woodmere, N. Y.
Strayhorne, George V.	4 M. E.		
Strickland, J. E.	1 Tex.	2004 Hillsboro	Warsaw, N. C.
Strickland, P. D.	1 Tex.	Route 6	Raleigh, N. C.
Strickland, R. C.	4 Tex.	205 5th, Box 3217	Nashville, N. C.
Stripling, S. A.	2 M. E.	1514 St. Mary's St.	Raleigh, N. C.
Strong, H. G.	3 Ch. E.	5 A College Court Apts.	Raleigh, N. C.
Strother, W. R.	1 Tex.	Route 1	Cary, N. C.
Stroud, Ray	1 Aero.	130 A, Box 4125	Wilkesboro, N. C.
Stroupe, G. N.	2 M. E.	325 A, Box 4188	Morganton, N. C.
Struthers, D. L.	4 C. E.	321 South, Box 3585	Wilmington, N. C.
Stuart, A. N.	2 Tex.	102 5th, Box 3202	Snow Camp, N. C.
Stubbs, W. B.	2 Tex.	224 South, Box 3556	Rockingham, N. C.
Stuckey, W. C., Jr.	2 Tex.	133 A, Box 4127	Goldsboro, N. C.
Stumberg, B. G., Jr.	1 Tex.	313 8th, Box 3781	Tallassee, Ala.

Name	*Classification*	*School Address*	*Home Address*
Sturkey, J. M.	4 Ch. E.	115 Wat., Box 3015	Albemarle, N. C.
Sugg, C. J.	1 Aero.	Withdrew	Ellerbe, N. C.
Suggs, J. R.	2 Ag. Ed.	202 6th, Box 3250	Whiteville, N. C.
Sullivan, C. S.	3 Ag.	128 South, Box 3528	Asheville, N. C.
Sullivan, C. S.	1 M. E.	2407 Clark Ave.	Greensboro, N. C.
Sullivan, E. T.	3 For.	215 Park Ave.	Douglaston, L. I., N. Y.
Sullivan, J. A.	1 C. E.	211 8th, Box 3745	
Summers, L. N., Jr.	3 Ag. Ed.	218 A, Box 4147	Statesville, N. C.
Summey, R. F.	2 Tex.	1714 Park Dr.	Dallas, N. C.
Sumner, J. W.	2 Ag. Ed.	108 5th, Box 3208	Conway, N. C.
Suniewick, J. L.	2 Ch. E.	103 South, Box 3503, South	Bound Brook, N. J.
Suttenfield, W. H., Jr.	3 Tex.	1816 Park Dr.	Charlotte, N. C.
Sutton, D. L.	1 E. E.	317 8th, Box 3875	Clinton, N. C.
Sutton, P. B.	1 For.	307 6th, Box 3267	Brownsville, Pa.
Sutton, W. M.	4 Tex.	117 C, Box 4214	Rocky Mount, N. C.
Sweet, H. M.	3 M. E.	218 C, Box 4246	Spencer, N. C.
Sweetman, R. M.	1 I. E.	9 9th, Box 4342	New York, N. Y.
Swett, J. A.	1 M. E.	331 7th, Box 3397	Southern Pines, N. C.
Swett, J. B., Jr.	4 Aero.	306 Wat., Box 3042	Southern Pines, N. C.
Swinney, J. G. C., Jr.	3 E. E.	10 Y. M. C. A.	Draper, N. C.
Sykes, E. C., Jr.	1 C. E.	2804 Fairview Rd.	Raleigh, N. C.
Sykes, G. H.	4 Aero.	101 Wat., Box 3001	Greensboro, N. C.
Symmes, L. B.	1 Aero.	301 7th, Box 3367	Wilmington, N. C.
Tabscott, J. C.	4 Tex.	109 8th, Box 3709	Washington, D. C.
Talmas, A. T.	1 M. E.	306 7th, Box 3372	Haiti, W. I.
Talbot, C. C.	1 C. E.	325 7th, Box 3391	Fayetteville, N. C.
Tarkington, W. W.	2 Tex.	2513 Clarke Ave.	Manteo, N. C.
Tarleton, C. F.	2 Ag. Ed.	105 6th, Box 3242	Marshville, N. C.
Tarleton, C. W.	4 Ag. Ed.	106 6th, Box 3242	Marshville, N. C.
Tart, C. V.	4 Ag. Ed.	13 South, Box 3609	Dunn, N. C.
Taylor, A. F.	3 Tex.	138 A, Box 4130	New Bedford, Mass.
Taylor, B. H.	1 Ag.	326 A, Box 4189	Tarboro, N. C.
Taylor, C. D.	4 Cer.	1408 Hillsboro St.	Portsmouth, Ohio
Taylor, G. E.	1 Aero.	204 9th, Box 4311	Bahama, N. C.
Taylor, G. S.	2 Ag. Ed.	211 5th, Box 3223	Jackson, N. C.
Taylor, H. G.	4 Ag.	108 South, Box 3508	Seaboard, N. C.
Taylor, H. G., Jr.	2 Ch. E.	317 Wat., Box 3053	Greensboro, N. C.
Taylor, J. B.	2 Tex.	203 A, Box 4135	Shelby, N. C.
Taylor, J. T.	1 Ag. Ed.	201 7th, Box 3333	Faison, N. C.
Taylor, M. K.	2 Aero.	105 South, Box 3505	Seaboard, N. C.
Taylor, P. A.	1 For.	130 7th, Box 3330	Norfolk, Va.
Taylor, P. W.	1 Ag.	203 7th, Box 3335	Enfield, N. C.
Taylor, R. G.	3 M. E.	2513 Clark Ave.	High Point, N. C.
Taylor, W. P.	2 Tex.	W 2 A Cameron Court Apts.	George, N. C.
Teachey, I. B., Jr.	1 Aero.	101 Chamberlain St.	Wallace, N. C.
Teague, E. L.	1 Arch.	1 Field House	Washington, D. C.
Teague, F. J.	1 Ag.	10 Y. M. C. A., Box 5276	Snow Camp, N. C.
Teague, H. W.	1 Ag. Ed.	208 10th, Box 4417	Taylorsville, N. C.
Teague, K. H.	5 Geol.	102 4th, Box 3112	Siler City, N. C.
Teague, R. T., Jr.	1 Ag.	238 C, Box 4263	Newland, N. C.
Teiser, E. S.	2 Aero.	1301 Hillsboro St.	Henderson, N. C.
Teiser, S. A.	2 Ch. E.	308 South, Box 3572	Henderson, N. C.
Temple, L. M.	1 Ch. E.	210 8th, Box 3744	Sanford, N. C.
Terrell, B. R., Jr.	1 Ch. E.	2631 Fairview Rd.	Raleigh, N. C.
Terry, H. L.	3 For.	218 C, Box 4246	Spencer, N. C.
Thomas, A. W.	2 Cer.	201 8th, Box 3725	Farmville, N. C.
Thomas, G. M.	2 Ag. Ed.	126 Forest Rd.	Cameron, N. C.
Thomason, E. L.	1 Tex.	202 10th, Box 4411	Charlotte, N. C.
Thomason, J. W.	2 Aero.	214 South, Box 3546	Roanoke Rapids, N. C.
Thomason, R. L.	1 For.	2302 Hillsboro St.	New Bern, N. C.

Name	*Classification*	*School Address*	*Home Address*
Thompson, Betty R.	4 Tex.	1207 Pearce St.	Raleigh, N. C.
Thompson, J. A.	1 E. E.	B 2 10th, Box 4423	Hallsboro, N. C.
Thompson, J. L.	4 Arch. E.	821 Hillsboro St.	Raleigh, N. C.
Thompson, R. L., Jr.	1 Aero.	A 1 10th, Box 4422	Hallsboro, N. C.
Thompson, W. B., Jr.	4 Ch. E.	21 Enterprise St.	Goldsboro, N. C.
Thompson, W. R.	2 Ag.	211 6th. Box 5932	Black Creek, N. C.
Thrailkill, W. J.	4 Ag. Ed.	24 South, Box 3620	Apex, N. C.
Throckmorton, W. S.	2 Ag.	124 A, Box 4119	Long Branch, N. J.
Thurman, E. B.	1 Cer.	702 Blount St.	Raleigh, N. C.
Thurman, J. R., III	1 Ch. E	216 8th, Box 3750	High Point, N. C.
Thurner, J. T.	4 For.	201 C, Box 5461	Greensboro, N. C.
Tinga, Jacob	4 Ag.	105 5th, Box 3205	Castle Hayne, N. C.
Todd, C. C.	2 C. E.	803 Holt Dr.	Raleigh, N. C.
Todd, F. A.	2 Ag. Ed.	2512 Clarke Ave.	Wendell, N. C.
Toffoli, P. V., Jr.	3 Aero.	104 A, Box 4104	Charlotte, N. C.
Tolan, H. S., Jr.	2 Aero.	329 South, Box 3593	Belhaven, N. C.
Tolbert, J. W.	4 E. E.	202 South, Box 3534	Collettsville, N. C.
Tolson, C. K., Jr.	1 Ag.	1618 Hillsboro St., Box 5084,	Morehead City, N. C.
Tomlinson, F. K.	1 I. E.	117 7th, Box 3317	Charlotte, N. C.
Tomlinson, J. S.	1 Ag.	311 8th. Box 3779	Black Creek, N. C.
Tomlinson, L. D., Jr.	5 Ag.	306 4th, Box 3132	Black Creek, N. C.
Travis, E. O.	1 Engr.	319 7th, Box 3385	Raleigh, N. C.
Traylor, R. L., Jr.	1 E. E.	333 7th, Box 3399	Norlina, N. C.
Trescott, Waldo	4 Tex.	1415 Hillsboro St.	Raleigh, N. C.
Trexler, H. F.	3 E. E.	216 A, Box 4145	Wadesboro, N. C.
Trexler, L. L.	4 Tex.	210 Woodburn Rd.	Asheville, N. C.
Tripp, J. D.	2 Ag. Ed.	215 A, Box 4144	Blounts Creek, N. C.
Trogdon, J. O.	1 Arch. E.	128 7th, Box 3328	Asheboro, N. C.
Trosper, Gregg	1 E. E.	205 10th, Box 4414	Greensboro, N. C.
Trotter, G. R., Jr.	1 Aero.	102 10th, Box 4402	Morganton, N. C.
Troutman, J. M., Jr.	3 Ag.	10 South, Box 3606	Statesville, N. C.
Troxler, R. T.	2 Ind. A.	209 6th. Box 1297	Elon College, N. C.
Troy, E. F.	1 E. E.	103 9th, Box 4303	Wilmington, N. C.
Truitt, J. R.	4 M. E.	317 Wat., Box 3053	Greensboro, N. C.
Truslow, J. A.	1 Aero.	121 8th, Box 3721	Spray, N. C.
Turlington, A. B.	1 Ag. Ed.	124 South, Box 3524	Clinton, N. C.
Turner, Bruce	1 Ag.	101 5th, Box 3201	Chadbourne, N. C.
Turner, P. P., Jr.	4 Cer.	309 Wat., Box 3045	Greensboro, N. C.
Turner, T. M.	3 Engr.	217 A, Box 4146	Washington, D. C.
Turner, W. D.	3 Ag.	206 6th, Box 3254	Henderson, N. C.
Turner, W. L.	1 Ag.	329 8th, Box 3797	Rocky Mount, N. C.
Tuten, S. A.	2 Ag. Ed.	212 5th, Box 3224	Edward, N. C.
Ullrich, F. N., Jr.	1 Tex.	2513 Clarke Ave.	Forest Hills, N. Y.
Umberger, C. D.	4 Ch. E.	118 Wat., Box 3018	Mt. Ulla, N. C.
Underwood, K. W.	3 Ag. Ed.	712 Brooks Ave.	Salemburg, N. C.
Upchurch, W. M., Jr.	2 Aero.	311 A, Box 4174	Durham, N. C.
Upton, F. E., Jr.	3 C. E.	212 South. Box 3544	Camden, N. C.
Urash, R. N. M.	2 Geol.	319 A, Box 4182	Woodside, N. Y.
Urquhart, T. M.	1 Aero.	2211 Hope St.	Lewiston, N. C.
Utley, E. E.	1 M. E.	310 7th, Box 3376	Moncure, N. C.
Vail, L. A.	1 M. E.	105 10th, Box 4405	Pikeville, N. C.
Valentine, J. P.	3 For.	302 C, Box 4267	Yonkers, N. Y.
Van Arsdale, W. D.	3 E. E.	203 6th, Box 3251	East Orange, N. J.
Vance, F. K.	3 E. E.	203 South, Box 3535	Winston-Salem, N. C.
VanLandingham, G. P.	2 Cer.	227 South, Box 3559	Greensboro, N. C.
Vann, J. G., Jr.	2 Cer.	1606 Scales St.	Raleigh, N. C.
Vaughan, B. F.	4 Tex.	216 South, Box 3548	Raleigh, N. C.
Vaughan, S. C., Jr.	2 Ch. E.	208 Ashe Ave.	Charlotte, N. C.
Vause, J. L.	2 Ag.	327 A, Box 4190	Kinston, N. C.
Vause, R. C.	4 Ag. Ed.	102 Wat., Box 3602	LaGrange, N. C.

Name	*Classification*	*School Address*	*Home Address*
Veach, E. K.	5 Ag. Ed.	103 Park Ave.	Raleigh, N. C.
Venters, T. R.	3 Aero.	305 5th, Box 3229	Badin, N. C.
Vernon, H. E.	3 Ag.	301 Park Ave.	Blanch, N. C.
Verrill, H. S.	2 Tex.	2407 Clarke Ave.	Westbrook, Me.
Vickers, E. T., Jr.	1 C. E.	311 7th, Box 3377	Durham, N. C.
Viets, Dorothydean	5 Entom.	407 South Boylan	Osawatomie, Kansas
Volkerding, B. F.	5 Bot.	123 Brooks Ave.	Ada, Minn.
Voorhest, L. R.	1 Ag.	124 7th, Box 3324	East Norwich, N. Y.
Waddell, B. F., Jr.	1 Cer.	103 8th, Box 3703	Concord, N. C.
Wade, P. J.	1 Tex.	307 6th, Box 3267	Lincoln Park, Mich.
Wade, W. E., Jr.	1 Aero.	11 Maiden Lane	Raleigh, N. C.
Wagoner, F. H.	2 Ag.	221 C, Box 4218	Gibsonville, N. C.
Wagoner, J. B.	2 Ag.	121 C, Box 4218	Gibsonville, N. C.
Wagoner, L. W.	1 Aero.	304 9th, Box 4324	Hamptonville, N. C.
Wakefield, F. W.	1 Ag.	102 C, Box 4021	Cresco, Pa.
Wakeley, J. T.	5 R. S.	Dixie Trail, Box 5537	Ames, Iowa
Walcoff, Harry	1 Tex.	212 10th, Box 4421	Trenton, N. J.
Waldenmaier, B. A., Jr.	1 C. E.	119 8th, Box 3719	New Bern, N. C.
Walker, G. F.	2 C. E.	125 Woodburn Rd.	Spring Hope, N. C.
Walker, G. W.	2 Ag.	211 5th, Box 3223	Murphy, N. C.
Walker, J. S.	1 Ind. A.	103 7th, Box 3303	Agawam, Mass.
Wall, P. N.	2 Tex.	127 Woodburn Rd.	Concord, N. C.
Wallace, J. J.	1 Ch. E.	124 N. Bloodworth St.	Raleigh, N. C.
Wallace, P. N.	2 Tex.	16 Enterprise St.	Franklinville, N. C.
Wallace, R. G.	4 Aero.	403 E. Edenton St.	Raleigh, N. C.
Walls, J. B.	1 Tex.	1301 Hillsboro St.	Forest Hills, L. I.
Walser, R. F.	1 C. E.	315 7th, Box 3381	Greensboro, N. C.
Ward, C. H.	1 Tex.	308 9th, Box 4328	High Point, N. C.
Ward, E. H.	2 For.	228 C, Box 4256	Cary, N. C.
Ward, J. C., Jr.	1 Engr.	121 8th, Box 3721	Rowland, N. C.
Ward, J. H., Jr.	1 Ch. E.	134 Woodburn Rd.	Raleigh, N. C.
Ward, R. L.	2 M. E.	313 A, Box 4176	Charlotte, N. C.
Ward, R. S.	1 Ag.	319 South, Box 3583	Nashville, N. C.
Warlick, R. D.	4 Ag. Ed.	106 Wat., Box 3006	Lawndale, N. C.
Warner, A. N.	2 E. E.	115 Chamberlain St.	Asheville, N. C.
Warren, D. R., Jr.	1 Ag.	2209½ Hope St.	Dunn, N. C.
Warren, Edward	1 Tex.	329 7th, Box 3395	Wilson, N. C.
Warren, J. A.	3 Ag. Ed.	208 6th, Box 3256	Roseboro, N. C.
Warren, J. O.	1 Aero.	234 8th, Box 3768	Dunn, N. C.
Warren, R. M.	2 Aero.	103 C, Box 4202	Greensboro, N. C.
Warren, Woodrow	1 Ag.	106 9th, Box 4306	Spring Hope, N. C.
Warrington, C. W.	1 E. E.	330 8th, Box 3798	New Bern, N. C.
Waterhouse, W. T.	1 C. E.	2207 Hope St.	Norwich, Conn.
Watkins, M. P.	2 Tex.	318 C, Box 4280	Norwood, N. C.
Watlington, H. C.	3 Ch. E.	311 Wat., Box 3047	Spencer, N. C.
Watson, C. K.	5 Tex.	16 Enterprise St.	Red Springs, N. C.
Watson, C. M.	1 Aero.	309 8th, Box 3777	Fayetteville, N. C.
Watson, D. M.	1 Aero.	1600 Bickett Blvd.	Raleigh, N. C.
Watson, T. L., Jr.	3 E. E.	210 5th, Box 3222	Wilson, N. C.
Watt, H. W.	3 E. E.	209 South, Box 3541	Charlotte, N. C.
Watts, J. M.	3 Ag.	220 Chamberlain St.	Statesville, N. C.
Watts, R. H., Jr.	4 Tex.	2513 Clark Ave.	Baldwin, L.I., N. Y.
Waynick, A. P.	1 Tex.	302 8th, Box 3770	Greensboro, N. C.
Waynick, D. L.	1 Tex.	307 9th, Box 4327	Greensboro, N. C.
Weatherly, R. M., II	2 M. E.	2402 Everett Ave.	Greensboro, N. C.
Weaver, D. S., Jr.	4 Ch. E.	520 Daughtridge St.	Raleigh, N. C.
Weaver, F. D., Jr.	4 Ch. E.	321 South, Box 3585	Wilmington, N. C.
Weaver, J. R., Jr.	4 Aero.	201 South, Box 3533	Hickory, N. C.
Weaver, R. E.	3 Ch. E.	2729 Everett Ave.	Asheville, N. C.
Webb, J. A.	4 Tex.	2407 Clark Ave.	Mt. Airy, N. C.
Webster, E. K., Jr.	2 M. E.	324 C, Box 4286	Haddon Heights, N. J.

Name	*Classification*	*School Address*	*Home Address*
Weeks, J. O.	1 Aero.	1 8th, Box 3803	Scotland Neck, N. C.
Weinel, W. H., Jr.	1 Aero.	117 8th, Box 3717	Spencer, N. C.
Wells, R. C.	1 Aero.	105 10th, Box 4405	Washington, D. C.
Wells, S. P.	4 C. E.	125 South, Box 3525	Rocky Mount, N. C.
Wells, W. W., Jr.	1 M. E.	116 7th, Box 3316	Canton, N. C.
Werner, A. M.	2 M. E.	Y. M. C. A.	New York, N. Y.
Wesson, R. H.	3 Ag.	216 C, Box 4224	Littleton, N. C.
Wesson, W. T.	5 Ag.	2220 Hillsboro St.	Lawrenceville, Va.
West, H. C.	1 C. E.	228 7th, Box 3360	Monroe, N. C.
West, S. G., Jr.	2 Aero.	2407 Clark Ave.	Greensboro, N. C.
Westbrook, S. E.	1 Ag.	2209½ Hope St.	Dunn, N. C.
Weston, C. C.	1 Ag.	8 9th, Box 4341	Asheboro, N. C.
Wetherington, M. G.	1 Tex.	Field House	Kinston, N. C.
Wharton, W. L., Jr.	2 For.	2407 Clark Ave.	Winston-Salem, N. C.
Whatley, T. B.	1 Aero.	105 9th, Box 4305	Elkin, N. C.
Wheeler, G. J.	4 Ag. Ed.	212 6th, Box 3260	Louisburg, N. C.
Whetstone, G. W.	2 Ag.	8 Ferndell Lane	Philadelphia, Pa.
Whisnant, C. E.	2 Ag. Ed.	201 4th	Polkville, N. C.
Whitaker, J. O.	4 Ag.	23 South, Box 3619	Horse Shoe, N. C.
White, E. S.	3 Ag. Ed.	112 6th, Box 3248	Colerain, N. C.
White, F. B., Jr.	2 Tex.	136 C, Box 4231	Lenoir, N. C.
White, G. E.	1 M. E.	216 8th, Box 3750	High Point, N. C.
White, J. C.	1 M. E.	331 8th, Box 3799	Elizabethtown, N. C.
White, J. E., Jr.	4 M. E.	2513 Clark Ave.	Oak Hill, W. Va.
White, J. I.	1 Arch. E.	302 9th, Box 4322	Burlington, N. C.
White, J. R.	2 M. E.	12½ Horne St.	Elizabethtown, N. C.
White, J. W.	1 Ag. Ed.	319 7th, Box 3385	Aulander, N. C.
White, K. H.	1 Aero.	306 8th, Box 3774	Chester, S. C.
Whitehead, L. G.	1 Ag.	139 A, Box 4131	Scotland Neck, N. C.
Whitehurst, S. L.	1 Ag.	322 7th, Box 3388	New Bern, N. C.
Whitehurst, T. B.	1 Tex.	133 7th, Box 3401	Greensboro, N. C.
Whitehurst, W. B.	3 Tex.	229 C, Box 4257	Greensboro, N. C.
Whiteley, Eli L.	5 Ag.	6 Enterprise St.	Georgetown, Tex.
Whitener, J. W.	1 E. E.	101 8th, Box 3701	Badin, N. C.
Whitener, W. J.	2 Cer.	121 South, Box 3521	Gastonia, N. C.
Whiteside, Carl	4 Ag.	306 5th, Box 3230	Rutherfordton, N. C.
Whitfield, H. A., Jr.	2 M. E.	Chapel Hill, N. C.	Chapel Hill, N. C.
Whitfield, J. K.	2 M. E.	217 South, Box 3549	Asheboro, N. C.
Whitlark, R. O.	1 Oc. Inf.	329 7th, Box 3395	Tarboro, N. C.
Whitley, S. D.	4 Ag. Ed.	308 Wat., Box 3044	Matthews, N. C.
Whitten, H. A.	5 Ag.	306 4th, Box 3133	Westminster, S. C.
Whittenton, C. M.	1 M. E.	105 8th, Box 3705	Dunn, N. C.
Whittington, C. W.	4 Ch. E.	304 Wat., Box 3040	Snow Hill, N. C.
Wiggin, N. K.	4 Tex.	137 A, Box 4129	Springfield, Pa.
Wiggins, C. A., Jr.	2 M. E.	107 South, Box 3507	Kinston, N. C.
Wiggins, E. H.	1 M. E.	115 7th, Box 3315	Edenton, N. C.
Wiggins, G. T.	3 Ag.	113 C, Box 4210	Mt. Olive, N. C.
Wiggs, J. H.	1 Tex.	307 A, Box 4172	Rocky Mount, N. C.
Wilburn, J. M., Jr.	4 Ag. Ed.	Route 5	Raleigh, N. C.
Wilder, C. A.	4 Ag.	16 South, Box 3612	Carthage, N. C.
Wiley, T. A., Jr.	2 Aero.	103 Chamberlain St.	Key West, Fla.
Wilfong, J. J.	4 Ag.	101 A, Box 4101	Mocksville, N. C.
Wilkins, W. E.	1 Tex.	134 8th, Box 3734	Greensboro, N. C.
Wilkinson, W. A., Jr.	1 Ch. E.	301 8th, Box 3769	Concord, N. C.
Willard, C. G.	1 M. E.	16 8th, Box 3818	High Point, N. C.
Willard, R. T.	1 Aero.	213 7th, Box 3345	High Point, N. C.
Williamowsky, D. J.	3 M. E.	322 South, Box 3586	Washington, D. C.
Williams, C. D., Jr.	1 M. E.	206 7th, Box 3338	Roanoke Rapids, N. C.
Williams, C. S., Jr.	1 Tex.	318 7th, Box 3384	Kings Mountain, N. C.
Williams, D. E.	1 Ag.	Box 7238	Raleigh, N. C.
Williams, D. L.	1 Ag.	322 8th, Box 3790	Yadkinville, N. C.

Name	*Classification*	*School Address*	*Home Address*
Williams, D. M.	1 Ag.	Poultry Farm, Box 5723	Raleigh, N. C.
Williams, F. D.	4 For.	215 Park Ave.	Rocky Mount, N. C.
Williams, H. C.	1 Aero.	317 7th, Box 3383	Middlesex, N. C.
Williams, J. F.	3 For.	223 South, Box 3555	Silver Spring, Md.
Williams, J. P., Jr.	1 Aero.	333 7th, Box 3399	Norlina, N. C.
Williams, J. R.	2 Ch. E.	204 C, Box 4235	Winston-Salem, N. C.
Williams, L. C., Jr.	4 C. E.	211 Hawthorne Rd.	Salisbury, N. C.
Williams, L. W., Jr.	1 Aero.	232 8th, Box 3766	Rose Hill, N. C.
Williams, M. S.	3 Ag.	111 A, Box 4108	Hillsboro, N. C.
Williams, R. G.	1 Aero.	122 8th, Box 3722	Rocky Mount, N. C.
Williams, T. G.	2 Arch.	238 A, Box 4164	Greensboro, N. C.
Williams, T. M.	4 Ch. E.	405 Calvin Rd.	Raleigh, N. C.
Williams, V. M.	1 Ag.	7 8th, Box 3809	Raleigh, N. C.
Williams, W. S., Jr.	4 Tex.	207 Wat., Box 3025	Middlesex, N. C.
Willamson, B. P.	1 Aero.	320 8th, Box 3788	Jonesboro, N. C.
Wlliamson, J. C., Jr.	3 Ag.	2202 Hillsboro St.	Bethel, N. C.
Williamson, R. E.	1 Ag.	134 7th, Box 3402	Wilson, N. C.
Williford, W. C.	1 Ag. Ed.	337 A, Box 4197	Elm City, N. C.
Willis, H. M.	4 Ag.	704 South, Box 3504	Elizabethtown, N. C.
Willis, R. G.	1 E. E.	110 6th, Box 3246	Toccane, N. C.
Willman, R. R.	1 For.	109 7th, Box 3309	Elizabeth, N. C.
Wilson, B. D., Jr.	1 Arch. E.	2408 Fairview Rd.	Raleigh, N. C.
Wilson, C. E., Jr.	2 E. E.	305½ Calvin Rd.	Raleigh, N. C.
Wilson, D. K.	1 For.	Y. M. C. A.	High Point, N. C.
Wilson, F. L.	1 Ag.	621 Aycock St.	Jonesboro, N. C.
Wilson, G. W., Jr.	3 Ag.	104 5th, Box 3204	Danville, Va.
Wilson, J. C., Jr.	1 Aero.	233 8th, Box 3767	Gastonia, N. C.
Wilson, J. M.	1 M. E.	206 7th, Box 3338	Roanoke Rapids, N. C.
Wilson, J. W., Jr.	1 Ag. Ed.	312 5th, Box 3236	Louisburg, N. C.
Wlson, L. E.	1 Ag.	125 Woodburn Rd.	Fayetteville, N. C.
Wilson, L. H., Jr.	2 Cer.	218 A, Box 4147	Greensboro, N. C.
Wilson, W. B.	1 Aero.	25 8th, Box 3826	Hendersonvillle, N. C.
Wilson, W. S.	4 E. E.	2510 Vanderbilt Ave.	Yanceyville, N. C.
Wimberley, V. M.	1 Ag. Ed.	301 7th, Box 3367	Apex, N. C.
Winborne, W. T.	3 Ag. Ed.	301 6th, Box 3261	Bailey, N. C.
Winchester, J. D.	2 Ag.	2513 Stafford Ave.	Raleigh, N. C.
Windley, J. A.	1 Ind. A.	8 Field House	Belhaven, N. C.
Winfrey, I. E., Jr.	3 C. E.	302 6th, Box 3262	Winston-Salem, N. C.
Wingate, J. J.	1 Arch. E.	2316 Hillsboro St.	Durham, N. C.
Winn, W. C.	1 Aero.	206 8th, Box 3740	Norfolk, Va.
Winn, W. L.	4 Arch.	4 Ferndell Lane	Norfolk, Va.
Winslow, A. T.	2 Tex.	222 South, Box 3554	Scotland Neck, N. C.
Winstead, B. E., Jr.	2 M. E.	329 C, Box 4291	Rocky Mount, N. C.
Winstead, R. C.	4 Ind. A.	317 South, Box 3581	Semora, N. C.
Winston, E. H.	3 Tex.	229 A, Box 4158	New York, N. Y.
Wirth, A. C.	1 Aero.	104 8th, Box 3704	Smithfield, N. C.
Wiseman, J. M.	1 E. E.	323 7th, Box 3389	Port Jervis, N. Y.
Witherspoon, J. M.	1 Ch. E.	102 7th, Box 3302	Lexington, N. C.
Witten, A. E.	4 C. E.	339 A, Box 3199	Gastonia, N. C.
Wofford, W. G.	4 Ag.	120 Forest Rd.	Hartsville, S.C.
Womack, G. I., Jr.	1 M. E.	301 9th, Box 4321	Kings Mountain, N. C.
Wommack, K. L.	4 M. E.	213 Wat., Box 3031	Winston-Salem, N. C.
Wommack, W. W.	3 Ch. E.	309 8th, Box 3777	Winston-Salem, N. C.
Wood, B. F.	1 Aero.	310 8th, Box 3778	Graham, N. C.
Wood, D. L.	2 Tex.	122 South, Box 3522	Gastonia, N. C.
Wood, R. B.	2 Aero.	6 Ferndell Lane	Tampa, Fla.
Wood, R. N.	1 Ag.	120 C, Box 4712	Graham, N. C.
Wood, R. W.	3 For.	223 South, Box 3555	Staten Island, N. Y.
Wood, T. C.	1 Aero.	103 8th, Box 3703	Graham, N. C.
Woodall, E. L., Jr.	3 Cer.	109 Wat., Box 3009	Smithfield, N. C.
Woodhouse, W. W., Jr.	5 Agron.	3209 Hillsboro St.	Raleigh, N. C.

Name	*Classification*	*School Address*	*Home Address*
Woodside, T. F.	1 E. E.	118 7th, Box 3318	Charlotte, N. C.
Woodward, D. M.	1 Aero.	1312 Glenwood Ave.	Raleigh, N. C.
Wooler, G. N.	2 E. E.	101 C, Box 4200	Wilson, N. C.
Woollen, J. W.	1 C. E.	132 7th, Box 3332	High Point, N. C.
Woolley, C. B.	2 E. E.	309 A, Box 4173	Charlotte, N. C.
Wooten, E. F.	4 E. E.	113 Wat., Box 3013	Wilson, N. C.
Wooten, F. L., Jr.	3 Ch. E.	7 South, Box 5344	Winston Salem, N. C.
Wooten, J. C., Jr.	2 Aero.	337 C, Box 4297	Gastonia, N. C.
Wooten, J. E., Jr.	2 M. E.	221 A, Box 4150	Wake Forest, N. C.
Wooten, W. C.	1 Tex.	309 9th, Box 4329	Rocky Mount, N. C.
Workman, J. M., Jr.	1 Aero.	305 4th, Box 3131	Charlotte, N. C.
Worrell, T. S.	3 Ch. E.	2407 Clark Ave.	Mt. Airy, N. C.
Worsham, J. J.	1 C. E.	2220 Hillsboro St.	Ruffin, N. C.
Worsley, O. C., Jr.	4 Aero.	326 South, Box 3590	Charlotte, N. C.
Worth, C. M.	4 Ch. E.	500 Whitaker Mill Rd.	Raleigh, N. C.
Worth, G. W.	2 Arch. E.	500 Whitaker Mill Rd.	Raleigh, N. C.
Wrenn, C. W.	1 Engr.	122 8th, Box 3722	Siler City, N. C.
Wrenn, O. Z., Jr.	4 Ch. E.	104 South, Box 3504	Durham, N. C.
Wright, C. S.	1 E. E.	2110 Reaves Dr.	Raleigh, N. C.
Wright, D. R., Jr.	2 Ch. E.	301 A, Box 4167	Wilkesboro, N. C.
Wright, Edwin	1 Ag.	Y. M. C. A.	Tabor City, N. C.
Wright, G. H.	3 M. E.	17 South, Box 3613	Laurinburg, N. C.
Wright, L. C.	4 Ch. E.	103 Chamberlain St.	Asheville, N. C.
Wylie, W. O.	1 Tex.	211 Wat., Box 3029	Charlotte, N. C.
Wynne, J. J.	1 Ch. E.	234 7th, Box 3366	Manchester, Mass.
Wyrick, G. G.	1 Aero.	115 N. McDowell St.	Raleigh, N. C.
Yancey, T. E.	2 For.	2316 Hillsboro St.	Norlina, N. C.
Yao, Nai Zer	4 Tex.	2541 Clark Ave.	Shanghai, China
Yarbrough, F. L.	1 E. E.	23 South, Box 3619	Hendersonville, N. C.
Yates, D. D.	2 Ag. Ed.	125 C, Box 4222	Stony Point, N. C.
Yenice, M. F.	3 I. E.	Grosvenor Garden Apts.	Istanbul, Turkey
Yoder, W. L., Jr.	3 E. E.	2208 Ridgecrest St.	Raleigh, N. C.
York, T. L.	3 Ag.	128 A, Box 4123	Waynesville, N. C.
Young, A. N.	2 Aero.	339 A, Box 4199	Oxford, N. C.
Young, B. L., Jr.	2 Aero.	335 C, Box 4295	Salisbury, N. C.
Young, G. G.	4 E. E.	302 South, Box 3566	Swannanoa, N. C.
Young, M. P., Jr.	3 E. E.	317 C, Box 4279	Princeton, N. C.
Young, R. E.	2 Arch. E.	310 6th, Box 3270	WinstonSalem, N. C.
Young, R. K.	1 Ch. E.	Cafeteria	Cramerton, N. C.
Younts, W. E., Jr.	1 Ag.	119 South, Box 3519	Greensboro, N. C.
Yow, E. C., Jr.	1 C. E.	326 8th, Box 3794	Fayetteville, N. C.
Yung, Yang-Zung	5 Tex.	2228 Hillsboro St.	Shanghai, China
Zachary, L. P., Jr.	3 Ch. E.	117 A, Box 4114	Taylorsville, N. C.
Zachary, R. A., Jr.	1 E. E.	107 8th, Box 3707	Charlotte, N. C.
Zeckendorf, S. L.	2 Ag.	107 A, Box 4102	Newark, N. J.
Zehner, R. F.	4 Ag. Ed.	101 C, Box 4200	Reading, Pa.
Zelaya, J. A.	5 Ag.	308 4th, Box 3134	Lima, Peru
Zellweger, E. R.	2 M. E.	2004 Hillsboro St.	Palisade, N. J.
Zuckerman, B. M.	1 For.	323 7th, Box 3389	New York, N. Y.