

Eighty-Second

Annual Commencement

North Carolina State University at Raleigh

Additions

pg. 17
18
22
23
24
25
26
27
28
30
32
33
34
35
39
46

ERRORS

pg. 16
17
34
31
67
68
37
70
32
26
39

Saturday, May 15

Nineteen Hundred and Seventy-One

Degrees Awarded 1970-71

Musical Program

EXERCISES OF GRADUATION

May 15, 1971

CARILLON CONCERT: 8:30 A.M.
Miriam Bailey, Carillonneur

The Memorial Tower

COMMENCEMENT BAND CONCERT: 8:45 A.M.
William Neal Reynolds Coliseum

Overture: Fanfare and CapriccioSchaefer

Marche SlavTchaikovsky

ChoraleNelhybel

ChesterSchuman

PROCESSIONAL: 9:15 A.M.

March ProcessionalGrundman

RECESSIONAL:

University Grand MarchGoldman

NORTH CAROLINA STATE UNIVERSITY COMMENCEMENT BAND
Donald B. Adcock, Conductor

Marshals provided by Golden Chain and Alpha Phi Omega

The Alma Mater

Words by:

ALVIN M. FOUNTAIN, '23

Music by:

BONNIE F. NORRIS, JR., '23

Where the winds of Dixie softly blow
o'er the fields of Caroline,

There stands ever cherished N. C. State,
as thy honored shrine.

So lift your voices! Loudly sing
from hill to oceanside!

Our hearts ever hold you, N. C. State,
in the folds of our love and pride.

Exercises of Graduation

William Neal Reynolds Coliseum

May 15, 1971

PROCESSIONAL, 9:15 A.M. _____ Donald B. Adcock
Conductor, North Carolina State University Commencement Band

The audience is requested to remain
seated during the Processional

PRESIDING _____ John Tyler Caldwell
Chancellor, North Carolina State University

INVOCATION _____ Oscar B. Wooldridge
*Coordinator of Religious Affairs
North Carolina State University*

ADDRESS _____ John Tyler Caldwell
Chancellor, North Carolina State University

CONFERRING OF DEGREES _____ John Tyler Caldwell
Chancellor
Harry C. Kelly
Provost

Candidates for baccalaureate degrees presented
by Deans of Schools. Candidates for advanced
degrees presented by Dean of the Graduate
School.

ANNOUNCEMENT OF GOODWIFE DIPLOMAS _____ John F. Hester
President, Student Senate

ANNOUNCEMENT OF OUTSTANDING TEACHER
AWARDS _____ Cathy J. Sterling
President of Student Body

REMARKS TO THE GRADUATING CLASS _____ William C. Friday
President, University of North Carolina

ALMA MATER

BENEDICTION

RECESSIONAL

The audience is requested to remain seated
until recessional music is concluded.

Social Hour and Distribution of Diplomas

School and Department Locations

11:15 A.M.

School of Agriculture and Life Sciences

Adult Education	216 Poe Hall
Agronomy, Crop Science, Plant Protection and Soil Science	149 and 251 Williams Hall
Animal Science	5-A Polk Hall
Biological and Agricultural Engineering	158 Weaver Laboratories
Biological Sciences	Diploma presentation 124 Dabney Hall; reception to follow in 3533 Gardner Hall
Biochemistry	
Biological Sciences Major	
Botany	
Entomology	
Genetics	
Microbiology	
Plant Pathology	
Wildlife Biology	
Zoology	
Conservation	124 Dabney Hall and 3533 Gardner or 149 and 251 Williams Hall
Economics	Erdahl-Cloyd Union Theatre and 256-258 Erdahl-Cloyd Union
Food Science	105 Schaub Food Science Building
Horticultural Science	121 and 159 Kilgore Hall
Poultry Science	224 Scott Hall
Rural Sociology	Forest Hills Baptist Church

School of Design

Erdahl-Cloyd Union Ballroom 11:15;
social hour 2.30 p.m. Brooks Hall Garden

School of Education

Poe Hall

School of Engineering

Biological and Agricultural Engineering	158 Weaver Laboratories
Chemical Engineering	113 Riddick Hall
Civil Engineering	Lobby of Mann Hall
Electrical Engineering	Thompson Theatre
Engineering Mechanics	119 Riddick Hall
Engineering Operations	William Neal Reynolds Coliseum
Furniture Manufacturing and Management	234 Riddick Hall
Industrial Engineering	234 Riddick Hall
Mechanical and Aerospace Engineering	242 Riddick Hall
Materials Engineering	Alumni Building
Nuclear Engineering	Burlington Nuclear Laboratories

School of Forest ResourcesCarmichael Gymnasium—West End, Main Floor
School of Liberal ArtsForest Hills Baptist Church
School of Physical and Mathematical SciencesLobby, Dabney Hall
School of TextilesNelson Textile Auditorium

ROTC Commissioning Ceremony

William Neal Reynolds Coliseum

May 15, 1971

PROCESSIONAL MARCH 2:00 P.M.Donald B. Adcock
Conductor, North Carolina State University Commencement Band

The audience is requested to remain seated
until processional music is completed.

NATIONAL ANTHEM

INVOCATIONJ. Randall Mishoe
Baptist Chaplain, N. C. State University

INTRODUCTIONSJohn Tyler Caldwell
Chancellor, North Carolina State University

ADDRESSRobert N. Ginsburgh
*Major General, U. S. Air Force, Commander, Aerospace Studies
Institute, Maxwell AFB, Alabama*

ADMINISTRATION OF OATH OF OFFICEColonel Owen T. Reeves
Professor of Aerospace Studies
Colonel William L. Boylston
Professor of Military Science

PRESENTATION OF CERTIFICATES

OF COMMISSIONMajor General R. N. Ginsburgh
U. S. Air Force
Colonel Jerry M. Sage
Deputy Chief of Staff, ROTC, Third U. S. Army

BENEDICTION

Academic Costume

Academic gowns represent a tradition handed down from the universities of the Middle Ages. These institutions were founded by the Church; the students, being clerics, were obliged to wear the prescribed gowns at all times. Round caps later became square mortarboards; the hoods, originally cowls attached to the gowns, could be slipped over the head for warmth.

Many European universities have distinctive caps and gowns which are different from those commonly used in this country. Some of the gowns are of bright colors and some are embellished with fur. A number of these may be noted in the procession.

The usual color for academic gowns in the United States is black. The bachelor's gown is worn closed, the master's and doctor's may be worn open or closed. The shape of the sleeve is the distinguishing mark of the gown: bachelor—long pointed sleeves; master—oblong, square cut in back with an arc cut away in front; doctor—bell shaped.

Caps are black. The tassels for the Ph.D. degree are gold and those for other graduate and professional degrees may be of the color corresponding to the trimmings on the hoods. The color of the tassels for bachelor's degrees indicates the curriculum of the graduate: Agriculture, maize; Design, brown; Education, light blue; Engineering, orange; Forest Resources, russett; Liberal Arts, white; Physical and Mathematical Sciences, yellow; Textiles, wine red.

The hoods are lined with the color of the institution from which the wearer received his degree. The trimming or collar of the hood is the color which designates the degree: Liberal Arts, white; Fine Arts and Architecture, brown; Science, golden yellow; Music, pink; Divinity, scarlet; Law, purple; Engineering, orange; Philosophy, blue; Medicine, green; Forestry, russett; Textiles, wine red.

Honorary degree hoods are distinguished as follows: Master of Arts (M.A.), white; Doctor of Humane Letters (L.H.D.), white; Doctor of Science (Sc.D.), golden yellow; Doctor of Divinity (D.D.), scarlet; Doctor of Laws (L.L.D.), purple.

DEGREES CONFERRED

May 15, 1971

School of Agriculture and Life Sciences



BACHELOR OF SCIENCE IN BIOLOGICAL AND AGRICULTURAL ENGINEERING

Jointly Administered by the School of Agriculture and Life Sciences
and the School of Engineering

* Joy Nelson Autry	Monroe
John William Bruce	Murphy
James Ray Leonard	Welcome
*H Steven Moen McEvoy	Charlotte
* Ronald Leecil Marlow	Statesville
Ronald Lane Parker	Marshville
Alan Lloyd Sink	Thomasville
Henry Hulon Welch, Jr.	Rougemont
Alan Herbert Whitehead	Hull, England
Fred Daniel Wilkinson	Oxford

BACHELOR OF SCIENCE IN CONSERVATION

Jointly Administered by the School of Agriculture and Life Sciences
and the School of Forest Resources

Charles Ray Bennett	Jackson Springs
† Edyce Esther Carter	Pawling, N. Y.
† Sam Gregory Ennis	Red Oak
Ralph Lynn Howard, Jr.	Union Grove
Stanley Alan Moore	Red Oak
† Zora Louise Rhodes	Flat Rock
† Alfred Wallace Weisbecker	Cresskill, N. J.

* Honors H Honors Program † In Absentia

BACHELOR OF SCIENCE

Agricultural Economics

* Danny Kerr Bailey	Rocky Mount
† Clen Ashley Ballance	Fairfield
† Julius David Davenport	Washington
* Johnny Francis Earo	New Castle, Del.
**H Duty Densmore Greene	Asheville
Clarence Pemberton Hawkins	Pine Level
Thomas Christopher Hege	Lexington
Harold Young Hodges, Jr.	Mount Airy
Durwood Swindell Laughinghouse	Pantego
William Lee Melton	Lenoir
James Thomas Morgan	Corapeake
** Frederick Glenn Smith	Fuquay-Varina

Agronomy

James Wesley Barnes, III	Wilson
* Ronald Thurman Burleson	New London
Justus Brown Coltrain, Jr.	Jamesville
Allen Wilson Cox, Jr.	Clarkton
David Eugene Crews	Winston-Salem
H Phillip Delano Holcombe	Raleigh
† Robert Worsley James, Jr.	Robersonville
Paul John Keeler	Claverack, N. Y.
Leslie Paul Smith, Jr.	Hertford
Thomas Albert Vann	Greenville
Kenneth Edward Warren	Newton Grove

Animal Science

Margaret Ellen Allison	Gastonia
Robert Lee Anderson	Statesville
† Charles Chesterfield Brown, Jr.	Gibsonville
Michael Phillip Brown	Winston-Salem
Jerry Lee Eskridge	Shelby
* Nancy Dale Hobbs	Charlotte
*H Larry Johnson	Evergreen
Thomas Edward Johnson, Jr.	Dobson
Cyrus Ervin Lewis, Jr.	Gibsonville
*H Donald Montgomery Lucas	Halifax
Gerald Paul McLaughlin	Mooresville
† Rafael Mejia Lopez	Bogota, Colombia, S. A.
Kathy Jo Moffat	Colorado Springs, Colo.
Ronald Gene Pearson	Clinton
Doyt Butler Phifer	Kings Mountain
**H Carl Daniel Pless, Jr.	Rockwell
†* George Jesse Repass, Jr.	Richmond, Va.
Phillip Ray Ricks	Goldsboro
† Eddie Dean Stocks	Greenville

* Honors ** High Honors H Honors Programs † In Absentia

† Charles Theodore Wheeler	Asheville
Herbert Ray Williams, Jr.	Kinston

Biological and Agricultural Engineering

Lewis Jackson Alphin	Mount Olive
Melvin Odell Crisp	Oak City
William Staley Driver, Jr.	Rolesville
Thomas Christopher Hege	Lexington
Walter Clifton McNeill, Jr.	Fayetteville
Ronald Wayne Nifong	Winston-Salem
Anthony Louis Smith	Beaufort
Raymond DeWitt Smith	Mount Olive
William Percy Woodard	Supply

Biological Sciences

Charles William Boardman	Cedar Island
**H Wanda Williams Collins	Windsor
H Mary Frances Cutting	Richmond, Va.
† John Jenkins Hains	Charlotte
** Vicki Gauthier Squire	Raleigh
Robert Gregory Upchurch	Raleigh
**H Guilford Laws Watson, III	Raleigh

Botany

Roy Tilden Gorman	Raleigh
Walter Scott Hansen	Hamlet
† Barbara Carol Howell	Charlotte

Entomology

James Roy Collins	Fayetteville
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Food Science

* Craig Alan Bromby	Roselle Park, N. J.
**H Susan Ferguson Greene	Ferguson
Charles Wilson Houpt	Raleigh

Horticultural Science

*H Dennis Edward Deyton	Green Mountain
James Enos Frost	Fairfax, Va.
Robert Franklin Harrell	Hertford
† Barbara Carol Howell	Charlotte
John Bryan Hunsinger, Jr.	Greensboro
**H Robert Daniel Lineberger	Dallas
Gary Bickford Parrott	Asheville
Alphonso Ward Sloop	Dublin, Va.

Plant Protection

Julian Reed Matthews	Hertford
Harrell Gray Todd	Yadkinville
*H James Alvin Wilson, Jr.	Scotland Neck

* Honors ** High Honors H Honors Programs † In Absentia

Poultry Science

Wayne Larue Byrd	Asheboro
*H Freddie Lanier Roberson	Plymouth

Rural Sociology

Allen Mitchell Brawley	Mooresville
Roy Kemper Props, Jr.	Richmond, Va.

Soil Science

†**H Waylon Everette Lynn, Jr.	Durham
Charles James Shields	Scotland Neck
* Gary Lee Wellmaker	Hunterville

Zoology

Wildlife Biology

H Harold Vann Blake	Wallace
Dewey Stephen Brown	Wendell
*H William Truman Bryson	Franklin
John Phillip Crosson	Salem, N. J.
David Byron Donnell	Wilmington
Mike Dale Everett	Fuquay-Varina
Victor Bradshaw Holland, III	Kannapolis
Michael Andrew Keathley	Albertson
*H Donald Richard Patterson	Reidsville
Robert B. Pittman, Jr.	Oriental
Connell Ewell Purvis	Bethel
* Michael John Riley	Durham
James Daniel Sanderson	Burgaw
Gerritt Wiley Smith, Jr.	Lancaster, Penna.
*H Garland Lee Swain	Columbia
William Harry Tarplee, Jr.	Deposit, N. Y.
Michael Ray Vaughan	Hampton, Va.
William James Wagoner	Durham
Walter Johnson Willis, Jr.	Fair Bluff

Zoology

John Elliott Barnhardt	Kannapolis
Terry Darlene Barrett	Winston-Salem
Richard Johnson Bartlett	Raleigh
Dempsey Hugh Barwick	LaGrange
Brian Wallace Beck	Alexandria, Va.
Thomas Wyatt Benton	Goldsboro
Daniel Dwight Bowman, Jr.	Seaboard
* Thel Gordon Boyette, Jr.	Roanoke Rapids
* Jacqueline Kay Brake	Alexandria, Va.
* Victor Miller Brugh, II	Roanoke, Va.
† Mac Steven Bryant	Franklin
*H Edgar Scott Clark, II	Cary
James Vance Clayton, Jr.	Raleigh
William Utley Fletcher	Raleigh
†*H John Oliver Fussell, III	Morehead City

* Honors ** High Honors H Honors Program † In Absentia

Alvin Richard Gates	Raleigh
Charlie Loyd Godley, Jr.	Aurora
* Winn Harrison Gregory	Raleigh
* Karen Sue Griffin	Reidsville
Sue Ann Hale	Salem, Va.
†*H LeRoy George Hoffman, Jr.	Raleigh
George Wayne Howell	Goldsboro
** Willard Lee Kennedy	Wendell
John Robert Kesler	Salisbury
**H Harry Elwood LeGrand, Jr.	Raleigh
†* Joseph Bateman Lumsden	Raleigh
Louie Caldwell Lynch, III	Fayetteville
Charles Bernard McCants, Jr.	Raleigh
Robert Hugh Osborne	Greensboro
Margaret Ann Paschal	Raleigh
Charlotte Louise Porter	Greensboro
† Bruce Carlton Smith	Albemarle
*H Mark Claiborne Smith	Richmond, Va.
† Joseph Lawrence Szabo	Portsmouth, Va.
Stephen Michael Wallis	Charlotte
Samuel Conrad Weatherly	Greensboro
*H Donald Nash Whitaker, Jr.	Raleigh
* Ezra Brooks Wilkins	Raleigh
† Jeremy Michael Witaszek	Charlotte
† Stephen Allison Wright	Wilmington, Del.

School of Design



BACHELOR OF ARCHITECTURE

* John Robert Adams	St. Albans, W. Va.
Terry Whitley Alford	Whitakers
Jorge Alsina	San Juan, Puerto Rico
* Stephen Taylor Barnhill	Durham
Michael Edmund Bennett	Raleigh
John Eugene Bolt	Atlanta, Ga.
* James P. Branden	Charlotte
Ted Richard Brown	Rockwell
Kent Bradley Carpenter	Durham
* John Maurice Cartwright	Washington
† Marshall Edward Caudle	Charlotte

* Honors ** High Honors H Honors Programs † In Absentia

* Jerry Wood Childers	Atlanta, Ga.
Dominic Michael Ciancitto	Montclair, N. J.
Jonathan Michael Clark	Pembroke
Arthur John Clement	Durham
Kenneth Allen Coston	Jacksonville
Walter Guy Davis	Kinston
John Hugh Dickerson	Monroe
* Donna P. Duerk	Raleigh
** Robert Joel Eit	Raleigh
* Sammy Worth Greeson	Randleman
Kirby Jon Grimes	Yorktown, Va.
* Archie Paul Gupton	Raleigh
** Ellis Faucett Hammond	Delmar, Del.
* Paul Wayne Hannah	Oakton, Va.
Daniel Jack Hayes	Wilkesboro
Harold Lynn Harrison	Battleboro
* Timothy Clayton Hoke	Durham
Patrick Joseph Holland	Raleigh
Steven Arthur Hurr	Fayetteville
Charles Terry Jackson	Raleigh
Brian Kent Johnson	Winston-Salem
Archer Thomas Joyce	Eden
Jacob Steven Kanoy	Winston-Salem
Stephen Paul King	Greensboro
Paul Robert Kinzie	St. James, N. Y.
Daniel Alexander McCanless, Jr.	Elberton, Ga.
James Edward McComas, Jr.	Raleigh
David Kent Meckstroth	Fort Lee, N. J.
James Edward Meyer	Kingsport, Tenn.
Mohammad Modirzadeh	Teheran, Iran
** Theophilus Jacob Pearce, III	Ruston, La.
Burroughs Hunt Perkins	Pennington, N. J.
Lonnie Perry Pittman	Scotland Neck
Donald Stephen Porter, Jr.	Charlotte
* James Robert Powell	Smithfield
Gerald Thomas Quick	Sanford
* John Evans Rice	Raleigh
Charles Laurence Robbs	Winston-Salem
Bruce Harold Schafer	Raleigh
** Marian Lee Scott	Raleigh
Robert Hubbard Sieburg	Charlotte
Ralph Edward Smith	Statesville
Francis Lee Tomek	Belleville, N. J.
John Richard Valley, Jr.	Princeton, N. J.
James Thomas Vinson, III	Goldsboro
Tony Ellsworth Ward	Liberty

BACHELOR OF ENVIRONMENTAL DESIGN

Larry Wayne Best	Warsaw
James Terry Bottom	Charlotte
† Michael Eli Buncick	Lenoir
* James Leonard Curtis	Liberty

* Honors ** High Honors † In Absentia

Bradley Ward Davis	Washington, D. C.
William Eli Gukich	Roanoke Rapids
Mark Randall Sechrest	Lexington
Kenneth John Towle	Fair Lawn, N. J.

BACHELOR OF LANDSCAPE ARCHITECTURE

Guy Lloyd Angster	Hendersonville
* Robert Clinton Ballou	Greensboro
Larry Keith Deese	Raleigh
Joseph Curtis Hill	Raleigh
Bruce Kenneth Martin	Madison
Richard Alan Paton	Charlotte
Henry Herbert Pope, Jr.	Robersonville
Samuel Thomas Reynolds	Ayden
Alexander deHaven Vare	Bryn Mawr, Penna.
Fred James Wooten	Wilmington

BACHELOR OF PRODUCT DESIGN

Dean Brickhouse Bell	Greenville
Ronald Jeff Berndt	Hickory
William Cecil Blackman	Raleigh
William Joseph Bunn, Jr.	Wilson
Priscilla Kay Chandler	Hollywood, Fla.
Dennis Barrie Davis	Raleigh
William Ryan Eppes	Charlotte
Samuel Fredrick Ewing	Orlando, Fla.
* Barna Allen Farrell	Troy
Robert Lynn Fouts	Thomasville
David Garrett Jones	Fayetteville
Gary Edwin Jones	Valdese
* Thomas Stephen Jones	Asheboro
** Philip Gammons Lawless	Rowayton, Conn.
Andrew Norman Leager	Raleigh
James Stephen Little	Charlotte
Hall Crews Miller, Jr.	Ayden
† Richard Frederick Moss	Silver Spring, Md.
James Wiley Price	Raleigh
Stephen Holt Robertson	Wilmington
Robert Neill Scott	Chapel Hill
Yoshikazu Takishita	Fayetteville
David Kent Templeton	Raleigh
* Walter Waldermiere Wiebe	Raleigh

* Honors ** High Honors † In Absentia



BACHELOR OF ARTS IN PSYCHOLOGY

Jack Carter Austin	Los Angeles, Calif.
Stephen Lloyd Bair	Greensboro
George John Belovuss	Red Bank, N. J.
** Cheryl Danelle Coover	Chappaqua, N. Y.
John Edward Davis, Jr.	Winston-Salem
Nancy Joan Davis	Raleigh
* Willard Doral Ferrell	Weldon
Richard William Gates, Jr.	York, Penna.
* Irving S. Greentree, III	Richmond, Va.
Doris Louise Holding	Raleigh
† Stephen Paul Kerchner	Severna Park, Md.
* George Wilson Logan	Ellenboro
Frank Conrad Marziani	Ardmore, Penna.
→ Reid Allan Petty	Rural Hall
Albert Earl Prince, Jr.	Durham
* Sandra Jo Pulley	Zebulon
†* William Reed Seronello	Raleigh
** Linda Gail Stevenson	Goldsboro
Warren Dudley Uzzle	Dunn
Vernon Clyde Wilson	Asheboro

BACHELOR OF SCIENCE IN EDUCATION

Agricultural Education

Daniel Eugene Bailey	Clinton
David Reid Batten	Wendell
* William Hubert Buckner, Jr.	Burnsville
Jennings Bullard	Maxton
* Roger Bain Coble	Aberdeen
* Thomas Eugene Furlough	Hamilton
Kenneth Laurie Gasper	Florence, S. C.
Gary Richardson Griffin	Graham
Dennis Earl Hayes	Cerro Gordo
* Johnny Robert Hendricks	Zebulon
Ronald Lee Kopley	Lexington
Gerald Paul McLaughlin	Mooreville
Wiley Leamon Mabe	Ellerbe

* Honors ** High Honors † In Absentia

† Gerald Wayne Mangum	Monroe
Rufus Benjamin Roberts, Jr.	Washington
* Lee Watson Sloan	China Grove
* Stephen Wood Smith	Burlington
Vaughn Walter Sprinkle	Statesville
* George Lewis Taylor	Hookerton
* Ronnie Wilson Thompson	State Road
Roger Eric Walters	Orrum
* Rupert Gerald Warren	Newton Grove
William Claude Wright	Biscoe

Industrial Arts Education

David Neal Essic	Mocksville
Max Alexander Holshouser	Richfield
Francis Ray Johnson	Kinston
Thomas Bartholomew Prieto	Oradell, N. J.

Mathematics Education

* Mary Amelia Ashcraft	Kensington, Md.
Jacqueline Hensley Brown	Morganton
Dianne Ray Carver	Durham
* Regina Whitfield Carver	Raleigh
Cecil Glenn Hargett	Monroe
Larry Joe Hauser	High Point
Joseph William Huntt	Hyattsville, Md.
Susan Janette Isenhour	Boone
Baron Vaughn Jackson	Hendersonville
* James Michael Justus	Hendersonville
Douglas Victor Kath	Garner
* Lela Mae Long	Hertford
Margaret Elizabeth Massengill	Clayton
Sarah Josephine Nahikian	Raleigh
** Jacquelyn Hemby Padgett	Jacksonville
* Janet Johnson Peregoy	Oak City
Richard Earl Poole	Efland
* Mary Katherine Rockefeller	Cary
* Maurice Check Sexton, Jr.	Lexington
Margaret Elizabeth Seymore	Sanford
Allan Edward Sturges	McLean, Va.
William Edward Sugg, III	Snow Hill
* Teresa Ann Vinson	Clayton

Science Education

† Danny Osborne Caviness	Lakeview
Robert Allen Davis	Raleigh
Stephanie Fanjul	Haddonfield, N. J.
** Jimmy Lynn Hipps	Valdese
* * Donna Ennis Hobby	Dunn

* Honors ** High Honors † In Absentia

Laurie Andrew Lyon	Oxford
†** Nancy Milnes Rhine ..	Cary
† John Baker Sinclair	City Island, N. Y.
Bobby Gene Spurgeon	High Point
* James Walter Tysinger	Concord

Vocational Industrial Education

* Thomas Lee Dreps	Raleigh
James Ward Humphrey	Ahoskie
Jerry Randall Parks	Lexington
Jerry Worley Wright	Jarvisburg

BACHELOR OF SCIENCE IN INDUSTRIAL ARTS

Grant Stephen Jones	Reidsville
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School of Engineering



Bobby Gene Hill - - - - - Greensboro

BACHELOR OF SCIENCE IN AEROSPACE ENGINEERING

Lewis Reeves Bridges	Asheville
** William Harvey Broome, Jr.	Gastonia
**H Paul Silver Browning, Jr.	Louisville, Ky.
*H James Owen Carson, Jr.	Concord
Donald Erwin Cashman	Charlotte
Robert Lewis Clapper	Raleigh
* Dennis Andrew Crenshaw	Raleigh
Bobby Gene Davis	Wilmington
Daniel Wilson Dodson	Wentworth
Jeryl Rae Hill	New Bern
Ronald Alvis Jones	Winston-Salem
Alan David Kerley	Charlotte
David Clifton Killen	Florence, S. C.
*H Phillip Franklin Lewis	Tabor City
Stephan Douglas Peterson	Asheville
Vito Paul Pierannunzi	Woonsocket, R. I.

* Honors ** High Honors H Honors Program † In Absentia

Ray Glenn Pope, Jr.	Perry, Fla.
* Earl Wayne Shumate, Jr.	Winston-Salem
David Harold Smith	Norfolk, Va.
† John Braswell Smith, Jr.	Deep Run
Terry Randall Smith	High Point
Richard Wayne Todd	Fayetteville

BACHELOR OF SCIENCE IN CERAMIC ENGINEERING

* Richard Charles Avery	Arlington, Mass.
Ernest Wayne Curley	Murfreesboro
Charles Wellington Foster	Newton
†* Robert Martin Price	Taylorsville
Elbert Lamont Recouley	Greensboro

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

†* Carlos Arturo Arensburg	Bogota, Colombia, S. A.
* H Shirley Randolph Boyette, Jr.	Hamlet
* H Thomas Burris Brandon, III	Williamston
* H Eugenia Abad Corbell	Guayaguil, Ecuador
Theron Ritchie Crump	Pineville
** H William Ross Davis	Butner
†* H Ollie Gene DeWitt	Biscoe
George Michael Folk	Cary
* H Leland Earl Garrett, Jr.	Greenville, S. C.
Charles Wesley Head	Winston-Salem
James Michael Herrington	Waynesboro, Ga.
Kerry Grayson Hilton	Lexington
* Larry Eugene Ledford	Bryson City
* David Thomas Ligon	Cleveland
* H Richard Lee McCoy	Charlotte
Jeffrey Martin	Kannapolis
Marcus Lewis Martin	Covington, Va.
James Newton Moore	Myrtle Beach, S. C.
* Albert Mayse Nash, Jr.	Raleigh
† John Richard Skerrett	Cedar Mountain
†** H Eugene Foster Tison, III	Chapel Hill
† Stephen Royce Trauth	Seaford, Del.
William Hamilton Wade	Chester, Va.
Ervin Terrell Wyrick	McLeansville

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Harold Brent Bass	Nashville
* Thomas Floyd Brady	Greensboro
* Matthew Albert Brown	Louisburg
Donald Edward Carmichael	High Point
* Ronald Wayne Carmichael	High Point
Douglas Murray Clayton	Henderson

* Honors ** High Honors H Honors Program † In Absentia

* Thomas Gilmer Corder	Elkin
*H Jorge Luis Cowley	Fayetteville
† Joseph Cox Crumpler	Albemarle
† Peter Bruce Currie	Edinburgh, Scotland
**H Grover Cleatus Dobbins, Jr.	Raleigh
James Monroe Dry, Jr.	Coleridge
Stephen Michael Ezzell	Kernersville
†* Gary Gregory Gunter	Bryson City
†* Gareth Edward Hayes	Greensboro
* Don Harvey Helms	Marshville
**H Milton Reid Hodges	Whiteville
† Charles Wright Horne	Richlands
† Kenneth Lawrence Horton, III	Winston-Salem
Roger Dale Isaac	Claremont
Douglas Lane Kennedy	Fayetteville
John Michael Livengood	Goldsboro
Tonie Bryant Lovin	Hamlet
Dale Brent McKinney	Ararat
Michael Francis Mahan	Fayetteville
** Robert Joseph Munchinski	Latrobe, Penna.
Charles Scarboro Nall, Jr.	Star
Joseph Harold Newton	Durham
* Welcome Woodrow Pryor, Jr.	Bat Cave
Russell Dean Radford	Forest City
George Edward Rusher, III	Salisbury
William Hutson Salley, Jr.	Hampton, Va.
Walter Adams Sewell	Durham
† Moussa Sians	Forest City, N. Y.
Warren Leroy Simmons	High Point
† Timothy Ray Smith	Salisbury
Robert Sherwood Stancil	Asheville
Dale Crum Stewart	Greensboro
*H Bobby Blake Teague	Siler City
Thamnoon Thaimongkol	Bangkok, Thailand
**H Ronnie Milford Thompson	Mount Olive
Chester Ray West	Winston-Salem
†* Steve Marshall Wilson	Lake Toxaway

BACHELOR OF SCIENCE IN CIVIL ENGINEERING, CONSTRUCTION OPTION

Barry Lee Arney	North Wilkesboro
James David Belk	Mount Ulla
† Randolph Davis Broome	Charlotte
* Steven Arthur Bryan	Evergreen
Jeffrey Walter Carpenter	Cocoa Beach, Fla.
Archie Floyd Carter, Jr.	Goldsboro
* Richard Brown Davis	Raleigh
* Philip Michael Dillon	Cleveland

* Honors ** High Honors H Honors Program † In Absentia

Ben Morgan Flowe	Charlotte
Julius Alfred Grisette, Jr.	Valdese
Theodore Eugene Guilford, III	Chocowinity
Clyde Sidney Gurley	Statesville
Alan Ray Hine	Winston-Salem
David Lee Horne	Concord
† Thomas Goforth House	Lincolnton
**H William Luther Isenhour, III	Charlotte
Wade Norman Jackson, Jr.	Raleigh
Glenn Alan Jones	Pfafftown
Joseph Edward Kane	Lebanon, Penna.
† David Jay Larson	Raleigh
Charles Nicholas McDuffie	Dunn
† Charles Dewey Riley, Jr.	Durham
Robert Bruce Royal, Jr.	Greensboro
John Thomas Stikeleather	Statesville
Wilton Wayne Strickland	Raleigh
James Odell Wilson, II	Lewisville

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

* David Leslie Aitken	Raleigh
James Nathaniel Alexander	Charlotte
Philip Aramoonie	Charlotte
**H Vaughn Ray Arey	Gold Hill
William Douglas Barham	Greensboro
* David Larry Beam	Shelby
* Thomas Charles Blackburn	West Jefferson
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** Carolyn Perry Chamblee	Zebulon
John William Davis	Asheville
John Austin Drum	Asheville
Walter Nevins Flournoy, Jr.	Arlington, Va.
Harold Ross Garrison	Salisbury
William John Herter	Maiden
Henry Jackson Hill	Durham
** Joan Marie Hrenko	Winston-Salem
Michael Ilku	Roebing, N. J.
* Ronald Gordon Ingram	Winston-Salem
William Walton Johnson, III	Charlotte
* William Lindsay Kivett, Jr.	High Point
Gerald Ross McDevitt	East Palestine, Ohio
†**H Randall Jay Raynor	Cary
* Carolyn Jane Rippy	Shelby
Alfred Mack Roberts	Durham
Anthony Scesny	Bellport, I. I., N. Y.
*H Ross Edward Scroggs, III	Chapel Hill
Sidney Walker Seymour, Jr.	Apex
Alan Lee Thompson	Sanford
Alexander MacDowell Vance, Jr.	Staten Island, N. Y.
* John McLaughlin Van Deman	Afton, Va.

* Honors ** High Honors H Honors Program † In Absentia

David William Westbrook	Burlington
** Margaret Alston Weston	Franklinton
* Sherry Lynn Wheelock	Alexandria, Va.

BACHELOR OF ARTS IN GEOLOGY

Larry Stewart Gregg	Bath
Robert Marion Logan, Jr.	Raleigh
† Thomas Wyrriot Morgan	Hoffman
† Robert Stephen Rummage	Asheboro

BACHELOR OF SCIENCE IN GEOLOGY

* Lewis Matthew Brown, Jr.	Raleigh
Pete Hammond Evans	High Point
Bruce Warren Harvey	Concord
James Bennett Hayes	Rocky Mount
† Henry James Lamb	Lumberton
Thomas Peyton Moorefield	Burlington
Ronald Lee Tesener	Morganton

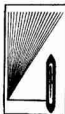
BACHELOR OF SCIENCE IN PHYSICS

* John Charles Angermayer	Burlington
Francis Laurence Bliven, Jr.	Bristol, R. I.
* Jackson David Coppley	Lexington
**H Terrence Franklin Deaton	Star
John David Evans, Jr.	Rocky Mount
* Glenn Matthew Friedman	New York, N. Y.
*H Robert Lee Holden	Charleston, S. C.
Rickie Lee Longbrake	Spring Lake
** Gregory Alan Losito	Sarasota, Fla.
* Leroy Armon McPherson, Jr.	Kill Devil Hills
* Davis ReGoalt Oliver, Jr.	Yorktown, Va.
**H Dean Eugene Pershing	Alexandria, Va.
†* Theodore Roger Rice	Morehead City
**H Walter Lee Smith	Siler City
†**H Ming Hing Tai	Hong Kong

BACHELOR OF SCIENCE IN STATISTICS

**H Mary Katherine Barrick	Arlington, Va.
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* Honors ** High Honors H Honors Program † In Absentia



BACHELOR OF SCIENCE IN TEXTILE CHEMISTRY

* Eleanor Hope Allen	Clinton
Gwendolyn Atkins Beasley	Charlotte
* Edison Bittencourt	Rio de Janeiro, Brazil
Patricia Dianne Briggs	Ca-Vel
Charles Allen Carter	Kannapolis
George Douglas Chamber	Quebec, Canada
* Pierre Emile Desroches	Quebec, Canada
Jimmy Ray Dorsett	Rockingham
† Robert Aleck Forte	Albemarle
* Edward Glenn Hare	Robbins
* James Shun-Hoi Ho	Hong Kong
Lacy Max Hurlocker	Mount Pleasant
Martha Kathleen Ingram	Badin
Benjamin Franklin Jones, Jr.	Kinston
* Pierre Lacasse	Quebec, Canada
* Sharon Patricia Mabbatt	Fayetteville
* Murry Grayson Miller	Asheville
Ralph Bruce Monk	Roxboro
Ralph Lambeth Montgomery	High Point
†* Alvah Dewayne Moore	Statesville
John Wilkins Pettus	Charlotte
* James Warren Rucker	Statesville
John Andrew Rutledge, Jr.	Crouse
Anil N. Shah	Sejwad, India
Rupert Ripley Sizemore, Jr.	Erwin
** James Roy Thagard	Fayetteville
Lewis Oscar Tripp	Ayden
* George Melvin Zygmuntowicz	Quebec, Canada

BACHELOR OF SCIENCE IN TEXTILE TECHNOLOGY

* Dennis Lee Atkins	Dobson
William Edwin Baldwin, III	Whiteville
Edwin John Banasiak, Jr.	Wilson
* James Arthur Bass, Jr.	Nashville
Stephen Craig Belton	Mount Airy
Robert Wayne Brooks	North Wilkesboro
† George Alexander Graham Browder, Jr.	Rockingham
David Mark Brown	Raleigh

* Honors ** High Honors † In Absentia

Timothy Lee Bruce	Spring Lake
Ricky Malone Burleson	Albemarle
John James Calvert	Raleigh
* Charles Kenneth Campbell	Gastonia
†** Richard John Cartwright	Quebec, Canada
Richard Trowbridge Cary	Greensboro
David Monroe Cates	Haw River
* Kenneth Kit-Chee Chan	Hong Kong
† Chung-Kae Charles Cheng	Hong Kong
August Reid Cole	Kannapolis
†** Andre J. Comtois	Quebec, Canada
Michael Ray Crawford	Statesville
† Michel Davidson	Quebec, Canada
†* Gary Russell Davies	Sanford
William Jenkins Davies	Tarboro
David William Drake	Hendersonville
David Martin Dudley	Rocky Mount
Jerry David Duncan	Roaring Gap
Horace Richard Faucette, Jr.	Brown Summit
David Andrew Fisher	Fairmont
Timothy Blane Furr	Albemarle
† Richard Leigh Gay-Lord	Roper
† Elias Goryn	Lima, Peru
James Sheridan Gray, Jr.	Winston-Salem
† Jeffrey Lynn Griffith	Lexington
† Robert Lynn Haithcock	Mount Gilead
Larry Hux Hartman	Williamston
James Herbert Hearn, Jr.	Rocky Mount
Etles Allen Henries, Jr.	Lowland
Samuel Hatcher Herring	Rocky Mount
George Cuthbert Heyward, Jr.	Enka
Clarence McKinley Hildebran	Sherrill's Ford
†* Leslie Wayne Hill	Fayetteville
George Currier Hood, III	Sanford
Larry Wayne Hopkins	Burlington
Herbert Neal Hunter, Jr.	Charlotte
William Terry Johnson	North Wilkesboro
** Thomas Michael Ketner	Winston-Salem
Richard Austin Lane	Greensboro
William Steven Lane	Salisbury
† Robert Lefebvre	Quebec, Canada
Robert Carl Lewis	North Wilkesboro
† James Denton Liles	Elizabeth City
* Jeffrey Archie Loftis	McLeansville
Kim Edward McAleer	Luray, Va.
Paul Andrew McKee, Jr.	Raleigh
Andrea Alberto Magni	Raleigh
Douglas Torrence Martin	Garner
John Marvin Mebane, Jr.	Rocky Mount
Gregory John Meurs	High Point
Ernest Kent Miller	Cary

* Honors ** High Honors † In Absentia

Nicholson Graham Neville, Jr.	Enfield
† Mark Christopher Newman	Goldsboro
* Jacques Normandin	Quebec, Canada
Stephen Gregory Parker	New Bern
Baird Loftis Paschal, Jr.	Siler City
** Pravinchandra M. Patel	Gujarat, India
James Wade Payne	McLeansville
Michael Terry Peak	Garner
†* Gilles A. Poirier	Quebec, Canada
James Ronald Price	Cliffside
James Bernard Reed	Winston-Salem
Myron Thomas Rhyne	Ellenboro
Jack Stephen Rogers	Greensboro
Philip Owen Ryalls	Belmont
Chaitanya M. Shah	Ahmedabad, India
Harshad Chimanlal Shah	Ahmedabad, India
† Rodney Leon Simpson	Beaufort
Stephen Wayne Solomon	Albemarle
* Roger Lee Souther	Old Fort
Donald Wilson Sprinkle	Winston-Salem
Eddie Joe Stroud	Charlotte
Ralph Bernart Tharpe, Jr.	Ronda
Steven Edward Thornburg	Mount Airy
Jeffrey Lawrence Todd	Rockingham
David Preston Turner	Burlington
* Guillermo Velez	Rio Piedras, Puerto Rico
James Elwood Whitford, Jr.	New Bern
Melvin Douglas Whitley	Albemarle
Riley Samuel Whitt, Jr.	Roxboro
* Phillip Ray Womble	Raleigh
* John Charles Woodward	Durham
Barry Gene Wyatt	Glade Valley
Harry Richard Younger	Mount Airy
†** Kai-Lim Willie Yung	Hong Kong

Professional Degrees



CIVIL ENGINEER, TRANSPORTATION OPTION

Owen William Synan, Jr.	Durham
Hollis Arnold Walker, Jr.	Raleigh
† Robert Wright Young	Durham

* Honors ** High Honors † In Absentia

ELECTRICAL ENGINEER

Ravjibhai Gordhanbhai SadariaGujarat, India

NUCLEAR ENGINEER

Tyndall Lee BaucomAlexandria, Va.
John Thomas BentonRichmond, Va.
Chei-Chung HoShantung, China
Ming Teh HsuTaiwan, China
Melvin Clark ReynoldsNewport News, Va.

Masters Degrees



MASTER OF AGRICULTURE

Mustafa Mohd NurSudan, Khartoum

MASTER OF ANIMAL SCIENCE

Soehartojo HardjopranjotoBodjonegoro, Java, Indonesia

MASTER OF APPLIED MATHEMATICS

Marvin Eugene ColeyAlbemarle
Daniel Hunt DremmanFort Myers, Fla.
† Daniel Edwards HancockMinnetonka, Minn.
† George Crittenden HughesPompano Beach, Fla.
† David Michael LyonsLinden, Penna.
† Joseph Wayne PaceSpring Hope
† Phyllis Pusey PraytorAsheville
† Dorothy Knott PrestonRaleigh
† John Joseph RankinJacksonville, Fla.
Bruce Arthur RogersNew City, N. Y.
† Mitchell Duane StuckerLeesville, La.
Edwin Reade Tripp, IIIRaleigh
† Gerald Leonard WeyandAllen Park, Mich.

MASTER OF ARCHITECTURE

Richard Frederick SeggelPotomac Md.

† In Absentia

MASTER OF BIOLOGICAL & AGRICULTURAL ENGINEERING

† Surapong Panichjaroen Chantaburee, Thailand

MASTER OF CIVIL ENGINEERING

Randy James Bellard Raleigh
Gilbert Neff Burnet Charlottesville, Va.
† Steven Lee Coleman Raleigh
Sydney Stanton Dibrell, IV Salisbury
Arthur Louis Kennedy Kinston
William Harrison Lockhart, III Charlotte
Thomas Hodgson McDowell Scotland Neck
† Salah John Maluf Raleigh
Keikhosrow Pajouhi Tehran, Iran
Lubin Victor Prevatt Lumberton
Ram Nath Vidyarthi Rangbay, Himachal

MASTER OF ECONOMICS

John Eligius Barth Closter, N. J.
Randy Allen Gray Hamilton, Ohio
† Fernando Bento Homem de Melo Campinas, S.P., Brazil
† Richard Erik Jenkins Concord
† Stephen Daniel Kanyr McKeesport, Penna.
Ira Daniel Measell, III Rockville, Md.
† Ghebre Selassie Mebrahtu Asmara, Ethiopia
Supanee Milindankura Bangkok, Thailand
† Arthur H. Padilla Oxford
† Charles Walker Mount Olive

MASTER OF EDUCATION

Adult and Community College Education

Emily Ruth Ballinger Warrenton
William Luther Culbertson Cary
Vercie Massengill Eller Raleigh
Betty Joyce Finch Spring Hope
Helen Jean Finch Spring Hope
† William Carl Holtzmann Winston-Salem
John Jasper Horton Fayetteville
Robert Reeves Hyatt Asheville
Walter Christopher Johnson Snow Hill
† Garland Dan McCullen Whiteville
Nancy Ijames Myers Union Grove
Elzie Kathleen Nelson Marietta, S. C.
Edward Jackson Simpson New Bern
James Preston West Lillington
Dorothy Gupton Wilkinson Oxford
Alicia Keisker Wright Raleigh

† In Absentia

Agricultural Education

David James Batten	Whiteville
Donald Calvin Baucom	Bakersville
Steven Hoyle Ervin	Cleveland
Roy Albert Eubanks	Kinston

Guidance and Personnel Services

† Barbara Davis Adams	Jackson, Miss.
William Harvey Anderson	Durham
Sharon Ham Bell	Raleigh
Margaret King Brady	Raleigh
Douglas Waddell Brinson	Raleigh
† Joan Louise Lent	Raeford
Betsy Anne Reed	Northfield, N. J.
Joe Bill Richardson	Raleigh
John Douglas Sterrett	Raleigh

Industrial Arts Education

John Thomas Atkins	Raleigh
John Peter Ristaino	Fayetteville

Mathematics Education

† Carolyn Laughlin Jackson	Buie's Creek
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Vocational Industrial Education

Lewis Douglas Davis	New Bern
† Esther White Hodges	Durham
Donald Booth Robbins	Goldsboro
† Thaddeus Sexton, Jr.	Fayetteville

MASTER OF ELECTRICAL ENGINEERING

Parmanand Atmaram Bhagchandani	Bombay, India
Kethly Owen Haslip	Castleford, Idaho
Lawrence Eugene Hooker	Greensboro
Tong Hui Kim	Seoul, Korea
Samuel Elbert Wallace	Raleigh

MASTER OF ENTOMOLOGY

Max Covington Sconyers	Cary
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MASTER OF FORESTRY

Herbert Ray Hendricks	Fredericksburg, Va.
Robert Neil Kitchens	Thomson, Ga.

† In Absentia

MASTER OF INDUSTRIAL ENGINEERING

Vikram Jerath	New Delhi, India
Arun Natwarlal Majmudar	Baroda, India
† Sunil Ochhavlal Parikh	Baroda, India

MASTER OF LANDSCAPE ARCHITECTURE

Jay William Randle	Indian Head, Md.
Jack Warren Ranney	Raleigh
David Mitchell Walker	Pittsburgh, Penna.

MASTER OF MATHEMATICS

† Sandy Dexter Brooks	Pembroke
† Raymond Dale Fortmeyer	Garner
† Herbert Leonard Shrieves	Salisbury, Md.
† John Richard Stoughton	Oak Ridge, Tenn.

MASTER OF MECHANICAL ENGINEERING

Abdul Majid Adam	Karachi, Pakistan
† Ghorban Ali Azarsoon	Semnan, Iran
† Chandramauli Hariharprasad Bhatt	Baroda, India
Pankaj Manharlal Mehta	Secunderabad, India
† Chandrakant Bhailalbhai Patel	Baroda, India
Uttambhai Bhagabhai Patel	Kesali, India
Maqbool Elahi Raja	Raleigh
Anpan Wu	Taiwan, China

MASTER OF PLANT PATHOLOGY

Alfred Stratton Elder	Raleigh
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MASTER OF PUBLIC AFFAIRS

Clyde Smith, Jr.	Raleigh
† John Henry Stone	Buffalo, N. Y.
Donald Broughton Street	Raleigh

MASTER OF SOIL SCIENCE

Alexander Peter Grant	Kinston
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MASTER OF STATISTICS

† Aldon Allen Turner	Kalispell, Mont.
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† In Absentia

MASTER OF TEACHING IN MATHEMATICS

Leslie Wilmer Bailey, Sr.	Williamston
James Fant Berry	Greensboro
Robert Dudley Cox, Jr.	Norfolk, Va.
Harry VanHorn Ellis, Jr.	Washington, D. C.
Jim Dick Miller	Borger, Texas
Waller Clarke Moore	Portsmouth, Va.
Stephen Alexander Moren	Lowellville, Ohio
Victor Pfeiffer	Norwich, Conn.
† Allen Bouldin Register	Raleigh

MASTER OF TEXTILE TECHNOLOGY

† Joseph Erh cheng Chang	Hong Kong
† Susan Rae Foster	W. Lafayette, Ind.
Kantilal Amritlal Jasani	Baroda, India
† Jagubhai Ranchhodhbhai Patel	Shevani, India
† Jimmy Dale Popham	Waycross, Ga.
Sureshkumar Thakordas Shah	Bombay, India
Guillermo Velez	Rio Piedras, Puerto Rico

MASTER OF WOOD AND PAPER SCIENCE

Fernando Edislao Mera	Lima, Peru
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MASTER OF ARTS

Politics

Betty Conley Brooks	Cary
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MASTER OF SCIENCE

Adult and Community College Education

† Robert Franklin Leggett, Jr.	Lumberton
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Animal Science

† Leonard Leon Allen	Selma
† Brian Kanoelani Ashford	Belhaven
Robert John Felsman	Silver Spring, Md.
† Leif Harry Thompson	Lusk, Wyo.

Biological and Agricultural Engineering

Mansoor Behroozi-Lar	Tehran, Iran
† Eugene Paul Daly	Dublin, Ireland
† James Harold Idell	Mohawk, Tenn.

† In Absentia

Botany

† Patricia Ann Wylie Wilson

Chemical Engineering

Dipak Hiralal Parekh Rajkot, India
 Fatma Sayed Radi Egypt

Chemistry

† William Anthony Kustes Louisville, Ky.
 † James Lawrence Suggs Charlotte

Crop Science

† Mohammed Haroon Mahaicony, Guyana
 Jose Francisco Luciani Venezuela, S. A.

Electrical Engineering

† Ronald Lee Earp Burlington
 ROBERT F. SMITH SEATTLE, WASH
 James Frank Smith Burlington

Food Science

Ernest Eugene Wilkerson Raleigh

Forestry

Robert John Weir Fairfax, Vt.

Geology

Harry William Boyd Van Cortlandtville, N. Y.
 † Austin Henry Slowey Dublin, Ireland

Horticultural Science

† Oscar Samuel Smith, Jr. Richmond, Maine

Materials Engineering

Lynn David Lineback Pfafftown
 John Graves Vann, Jr. Raleigh

Mechanical Engineering

† Suhas Ramkrishna Ghate Chaligan, India
 Shaik Jeelani Hyderabad, India
 Kamlesh Chinubhai Nawab India
 Neill Stephen Smith Raleigh
 † David Ray Stone Stony Point

† In Absentia

Nuclear Engineering

- † David Betel Haifa, Israel
† Stanley Kenneth Fraley Oak Ridge, Tenn.
Stephen Michael Quennoz Pacific, Mo.

Physics

- David Anthony Davis Banner Elk
Ronald Brown Maxwell Raleigh
George Joseph Oliver Snow Hill

Plant Pathology

- † Turner Bond Sutton Windsor
† Luis Alberto Vargas Lima, Peru

Psychology

- Kathryn Campbell Allison Raleigh
† Patricia Rutledge Hillow Raleigh

Rural Sociology

- Sulo Herman Heikkinen Fayetteville
† Dorothy Davis Moye Atlanta, Ga.
† Alicia Elena Unger-Leon Lima, Peru

Science Education

- † James Newell Appleton Brooklyn, N. Y.
† James Daniel Royster Raleigh

Soil Science

- † Gerald Eugene Byers Truro, Nova Scotia
† Carlos Rivera House Tegucigalpa, Honduras, C. A.

Textile Technology

- † Bala Nandlal Batavia Madras, India
Dhiraj Haribhai Darjee Surat, India
† Hardy Brittain Poole Thomasville

Vocational Industrial Education

- James Matthew Mazur Reidsville

Zoology

- † Aubrey Sidney Baynes Wendell
† Della Ruth Vanstory Schauer Statesville
Donald Wayne Stanley Kernersville

† In Absentia

Doctor of Education Degrees

- Ruby Gilbert Barnes, Adult and Community College
Education
Parkton, North Carolina
- Dissertation: The Role of the Hospital Staff Nurse as Ascribed by Nurses, Hospital Administrators and Doctors. (Under the direction of Edgar John Boone).
- Richard Wayne Daniel, Adult and Community College
Education
Coats, North Carolina
- Dissertation: Modes of Diffusing Knowledge to Community College Personnel. (Under the direction of Ronald W. Shearon and Edgar J. Boone).
- Richard Allen Etheridge, Adult and Community College
Education
Wilson, North Carolina
- Dissertation: Individual Value Orientations and Critical Thinking Ability of Persons Enrolled in Selected Adult and Community College Education Courses. (Under the direction of Dewey Allen Adams and Edgar J. Boone).
- Harold James Fegan, Occupational Education
Troy, North Carolina
- Dissertation: A Study of the Functions of the Local Director of Occupational Education in North Carolina. (Under the direction of Durwin M. Hanson).
- James Edgar Ferrell, Jr., Adult and Community College
Education
Annapolis, Maryland
- Dissertation: The Educational Role of the Maryland Cooperative Extension Service as Defined by State and County Extension Workers. (Under the direction of James Dalton George and Edgar J. Boone).
- John Rodney Garber, Adult and Community College
Education
Eden, North Carolina
- Dissertation: Characteristics of Students Enrolled in the Guided Studies Program at Rockingham Community College and their Implications for Curriculum Development. (Under the direction of Dewey Allen Adams).
- Joseph Conrad Glass, Jr., Adult and Community College
Education
Raleigh, North Carolina
- Dissertation: A Study of the Premarital Sexual Standards and Sources of Sexual Information of Methodist Youth Leaders, Including a Comparison of Their Standards to Those of Their Parents, Friends and Peers. (Under the direction of Edgar J. Boone).
- Henry Harper Goodman, Adult and Community College
Education
Kinston, North Carolina
- Dissertation: The Identification and Classification of Educational Outputs. (Under the direction of Jackson Mearns McClain and Edgar J. Boone).

- Robert Calvin Hubbard, Jr., Adult and Community College Education
Clemson, South Carolina
- Dissertation: Training Needs of County Extension Agents in South Carolina. (Under the direction of William Lester Carpenter and Edgar J. Boone).
- Jerome Joseph Klement, Adult and Community College Education
Florence, Kentucky
- Dissertation: The Effects of Three Reinforcement Schedules and Two Media in Presenting Computer Assisted Instruction to Under-educated Adults. (Under the direction of Emily H. Quinn).
- † Eugene Francis Pilgram, Adult and Community College Education
St. Paul, Minnesota
- Dissertation: Expectations of Minnesota Agricultural Extension Staff for the Programming Role of Area Specialized Extension Workers. (Under the direction of Edgar J. Boone).
- Carl Duncan Price, Adult and Community College Education
Selma, North Carolina
- Dissertation: Attitude Changes of Teachers During a Three-Week Intensive Adult Education Experience on School Desegregation. (Under the direction of Dewey Allen Adams).
- Lloyd L. Rutledge, Adult and Community College Education
Washington, D. C.
- Dissertation: Selected Socio-psychological Behavioral Changes Occurring in Boys and Girls Involved in the Arkansas Special 4-H Project. (Under the direction of Edgar J. Boone).
- Maurice Ray Stirewalt, Adult and Community College Education
China Grove, North Carolina
- Dissertation: Academic Success of North Carolina Community College Transfer Students at the University of North Carolina at Charlotte. (Under the direction of Edgar J. Boone).
- † Dorothy Ellen Tate, Adult and Community College Education
Bland, Virginia
- Dissertation: A Study of Competencies and Factors Related to Continuing Education for Faculties of Hospital Dietetic Internship Programs. (Under the direction of Emily H. Quinn).
- Muriel Arlene Vollum, Adult and Community College Education
Albert Lea, Minnesota
- Dissertation: The Effectiveness of Proctor Interaction in Computer-Assisted Instruction in Relation to Certain Adult Characteristics. (Under the direction of Edgar J. Boone).
- † Richard Ernest Wheaton, Adult and Community College Education
Gainesville, Florida
- Dissertation: An Administrative Role Study of the County Extension Director Job Group in the Florida Cooperative Extension Service. (Under the direction of Edgar J. Boone).

† In Absentia

- George Daniel Wood, Adult and Community College
Education
Middletown, Maryland
- Dissertation: The Bureaucratic-Professional Role Orientations of the Public School Teacher as Perceived by Teachers and Principals. (Under the direction of Robert John Dolan).
- Roger William Woodbury, Guidance and Personnel Services
Raleigh, North Carolina
- Dissertation: A Study Concerning An Investigation of Vocational Decision Making Behavior and Two Correlates: Vocational Maturity and Intelligence on Technical Students Enrolled in Four Vocational Training Programs. (Under the direction of William E. Hopke and Bert W. Westbrook).

Doctor of Philosophy Degrees

- Charlie Frank Abrams, Jr., Biological and Agricultural
Engineering
Pinetops, North Carolina
- Dissertation: Modeling the Vibrational Characteristics of the Human Hand by the Driving Point Mechanical Impedance Method. (Under the direction of Charles Wilson Suggs).
- Lyles Cornwell Adair, Electrical Engineering
Chapel Hill, North Carolina
- Dissertation: Effects of Surface Roughness on the Conduction Losses at Millimeter Wavelengths. (Under the direction of Frederick Joseph Fischer).
- † John Ashley Allen, Jr., Psychology
Raleigh, North Carolina
- Dissertation: An Examination of the Relationships Between Orienting Response Level, Voluntary Responders, and Conditioners. (Under the direction of Robert E. Lubow).
- Stanley Edward Becker, Mechanical Engineering
Louisville, Kentucky
- Dissertation: The Effects of Cutting Speed and Wear Land Length on the Surface Integrity of AISI 4340 Steel. (Under the direction of John A. Bailey).
- † Dhara Singh Bhatti, Plant Pathology and Entomology
Haryana, India
- Dissertation: The Lespedeza Cyst Nematode, *Heterodera lespedezae*, Its Life Cycle and the Influence of Certain Environmental Factors on Development and Pathogenicity. (Under the direction of Joseph Sasser).
- Robert Wallace Bohall, Economics
Fairfax, Virginia
- Dissertation: Pricing Performance of the Marketing System for Selected Fresh Winter Vegetables. (Under the direction of Richard A. King).

† In Absentia

- † Jack Haiden Britt, Physiology
Bowling Green, Kentucky
Dissertation: Control of the Bovine Estrous Cycle with Melengestrol Acetate. (Under the direction of Lester Curtis Ulberg).
- Von Lenord Byrd, Wood and Paper Science
Madison, Wisconsin
Dissertation: An Investigation of Handsheet Structural and Property Changes During and After Creep Under Constant and Cyclic Relative Humidity Environments. (Under the direction of Eric L. Ellwood and Knut Paul Kringstad).
- Robert Bancroft Cate, Jr., Soil Science
LaHoya, California
Dissertation: Improving the Interpretation of Soil Fertility Correlation Data—A Comparison of Continuous and Discontinuous Models, Using a Variety of Data Sets. (Under the direction of James W. Fitts).
- Danice Heartsill Costes, Entomology
Troy, Alabama
Dissertation: Comparative Morphological Study of Five Tribes of the Cercopinae (Homoptera: Cercopidae). (Under the direction of David Allan Young, Jr.).
- † Robert Martin Danielson, Soil Science
Wenatchee, Washington
Dissertation: The Ecology and Physiology of *Trichoderma* in Forest Soils. (Under the direction of Charles B. Davey).
- Vincent Frank Gallucci, Biomathematics
Lackawanna, New York
Dissertation: Some Mathematical Aspects of Certain Wide-Sense Stationary Processes Relevant to Biology. (Under the direction of H. Robert van der Vaart).
- Jorge Diorayom Garcia, Food Science
Canlubang, Laguna, Philippines
Dissertation: The Influence of High Protein, High Glucose and High Fat Dietary Supplements on Some Chemical and Physical Characteristics of Chicken *Pectoralis*. (Under the direction of Charles H. Hill and James R. Harris).
- Mitchell Wall Haller, Jr., Materials Engineering
Richmond, Virginia
Dissertation: X-ray Residual Stress Analysis of a Dental Gold-Porcelain System. (Under the direction of Charles R. Manning, Jr.).
- Lawrence Michael Hanafy, Applied Mathematics
New Orleans, Louisiana
Dissertation: A Transformation Approach to Optimal Control Problems with Bounded State Variables. (Under the direction of Hans Sagan).
- † James Patrick Hanrahan, Animal Science
Dublin, Ireland
Dissertation: The Effects of Population Size and Selection Intensity on Response to Selection for Increased Postweaning Gain in Mice. (Under the direction of Eugene J. Eisen).

† In Absentia

- † Dermot Harrington, Statistics
Dublin, Ireland
- Dissertation: A Comparison of Several Procedures for the Analysis of the Nested Regression Model. (Under the direction of J. A. Warren and H. L. Lucas).
- John Douglas Hatcher, Mechanical Engineering
Louisia, Kentucky
- Dissertation: Heat Transfer during Sublimation Dehydration. (Under the direction of James Edward Sunderland).
- † Marieta Barrow Heaton, Psychology
Raleigh, North Carolina
- Dissertation: Stimulus Coding in the Species-Specific Perception of Peking Ducklings: An Analysis of Critical Elements and Their Prenatal Emergence. (Under the direction of Gilbert Gottlieb).
- Robert Lee Henry, Civil Engineering
Lewisburg, West Virginia
- Dissertation: Behavior of Rectangular Prestressed Concrete Beams Under Combined Torsion, Bending, and Shear. (Under the direction of Paul Zung-Teh Zia).
- † Charles D. Holder, Wood and Paper Science
Wilmington, North Carolina
- Dissertation: Parameters Affecting Penetration into Paper of Latex-Pigment Coating Composition by a New Technique. (Under the direction of Chester G. Landes).
- George Louis Hosfield, Crop Science and Genetics
Manasquan, New Jersey
- Dissertation: Physiological Investigations on Growth and Agronomic Characteristics Associated with Alien Cytoplasm in Isogenic Lines of Male Sterile Tobacco, (*Nicotiana tabacum* L.). (Under the direction of Earl Allen Wernsman).
- Antoni Karol Jakubowski, Mechanical Engineering
Blacksburg, Virginia
- Dissertation: Part I: Investigation of the Flow Conditions in an Arc-Heated Hypersonic Free Jet. Part II: Effect of Angle of Incidence on the Response of Cylindrical Electrostatic Probes at Supersonic Speeds. (Under the direction of Frederic Otto Smetana).
- † Gardner Dulany Jones, Jr., Electrical Engineering
Raleigh, North Carolina
- Dissertation: Dispersion as a Measure of Communication Channel Distortion. (Under the direction of John B. O'Neal, Jr.).
- † Saroj Joshi, Biochemistry
Nainital, India
- Dissertation: Further Purification and Characterization of Ca⁺⁺-dependent Adenosine Triphosphatase from Chloroplasts of *Euglena gracilis*. (Under the direction of Joseph S. Kahn).

† In Absentia

- David Cornelius Korts, Statistics
Denver, Colorado
Dissertation: Estimators Based on a Closeness Criterion over a Restricted Parameter Space for the General Linear Model of Full Rank. (Under the direction of Dana Quade).
- Kian Djiang Kwik, Soil Science
Raleigh North Carolina
Dissertation: Plant and Soil Effects of Fertilizer Application to high bush blueberries (*Vaccinium corymbosum*, L.) Variety Wolcott. (Under the direction of George A. Cummings and Walter E. Ballinger).
- William Stone Lassiter, Mechanical Engineering
Newport News, Virginia
Dissertation: The Detection of Surface Contaminants by Auger Electron Spectroscopy. (Under the direction of Frederick Otto Smetana).
- Paul Speigle Lehman, Plant Pathology
Boswell, Pennsylvania
Dissertation: The Effects of *Heterodera Glycines* Upon Nitrogen Fixation in Soybean and the Influence of pH and Inorganic Ions on Nematode Activity. (Under the direction of Kenneth R. Barker and Donald Huisingh).
- † Fang Hui Liao, Soil Science
Raleigh, North Carolina
Dissertation: An Evaluation of the Relationship Between Water Uptake and Nitrate Absorption by Corn Plant in the Soil System. (Under the direction of William Victor Bartholomew).
- † Richard Gerard MacCarthy, Soil Science
Dublin, Ireland
Dissertation: Soil Acidity as a Factor in the Growth of *Pinus taeda* L. (Loblolly Pine). (Under the direction of Charles B. Davey).
- † William Arthur McClenny, Physics
Lucama, North Carolina
Dissertation: A Study of Beam-Plasma Systems in which the Electron Beam is Simultaneously Pinched by Both Gas Focusing and Magnetic Self-Focusing Forces. (Under the direction of Willard H. Bennett).
- † Robert Markman, Psychology
Brooklyn, New York
Dissertation: Sensation-Seeking and Environmental Preference and Description. (Under the direction of Bruce Norton).
- David Guy Modlin, Jr., Civil Engineering
Williamston, North Carolina
Dissertation: Synthesis of through trip patterns in small urban areas. (Under the direction of John William Horn).
- George William Moore, Biomathematics
Highland Park, Michigan
Dissertation: A Mathematical Model for the Construction of Cladograms. (Under the direction of H. R. Van Der Vaart).

† In Absentia

- Robert Leroy Morgan, Psychology
Beaufort, South Carolina
- Dissertation: The Effects of Color in Textbook Illustrations on the Recall and Retention of Information by Students of Varying Socio-Economic Status. (Under the direction of John K. Coster and Howard G. Miller).
- Kenneth Earl Muse, Zoology
San Angelo, Texas
- Dissertation: A Comparison of Trypanosomatids: Ultrastructure, Function, and Morphogenesis. (Under the direction of John F. Roberts).
- † Devaray Naik, Microbiology
Mysore State, India
- Dissertation: Enzymatic Studies on the Metabolic Regulation of Fatty Acid Synthesis in *Lactobacillus plantarum*. (Under the direction of John Joseph McNeill).
- † Douglas Lee Roy Neeley, Statistics and Genetics
Portland, Oregon
- Dissertation: Disequilibria and Genotypic Variance in a Recurrent Truncation Selection System for an Additive Genetic Model. (Under the direction of John O. Rawlings).
- † Pedro Raul Onoro-Cerra, Genetics
Colombia, South America
- Dissertation: Effect of Environment on the Stability of Principal Components in Maize. (Under the direction of Major Moreland Goodman).
- † Alcalá Gilberto Paez, Statistics
Turrisba, Costa Rico, South America
- Dissertation: Some Contributions to Soil-Fertilizer Response Modeling. (Under the direction of Lawrence Alan Nelson).
- Chao-Kuang Pian, Mathematics
Taiwan, China
- Dissertation: On Simple Rings with Uniform Right Ideals. (Under the direction of Kwangil Koh).
- † Robert Kuntz Reid, Botany
E. Stroudsburg, Pennsylvania
- Dissertation: Ultrastructural Variation in Calli of Several Plants Cultured Under Varying Conditions. (Under the direction of Ernest A. Ball).
- † John Gilbert Rogers, Jr., Zoology
Springfield, Pennsylvania
- Dissertation: Percutaneous Absorption Through the Feet of Red-winged Blackbirds (*Agelaius phoeniceus*). (Under the direction of Frederick S. Barkalow, Jr.).
- Larry Gail Sellers, Entomology
Fremont, Michigan
- Dissertation: Distribution, Metabolism, and Localization of Dieldrin in the Adult House Fly, *Musca domestica* (L.). (Under the direction of Frank Edwin Guthrie and Richard C. Axtell).

† In Absentia

- Ying Hui Shih, Electrical Engineering
Taiwan, China
Dissertation: Delay Adaptive Differential Pulse Code Modulation System. (Under the direction of Raymond William Stroh and John Benjamin O'Neal, Jr.).
- Lalit Kumar Sinha, Biological and Agricultural Engineering
Bihar, India
Dissertation: A Mathematical Model to Simulate Surface Runoff from Small Watersheds. (Under the direction of Edward Hempstead Wiser).
- Ronald Ernest Sneed, Biological and Agricultural Engineering
Raleigh, North Carolina
Dissertation: Projected Irrigation Water Requirements for Northeast North Carolina above Cape Lookout for the Year 2020. (Under the direction of George James Kriz)..
- Terry Anthony Straeter, Applied Mathematics
Saint Ann, Missouri
Dissertation: On the Extension of the Davidon-Broyden Class of Rank One, Quasi-Newton Minimization Methods to an Infinite Dimensional Hilbert Space With Applications to Optimal Control Problems. (Under the direction of Hans Sagan).
- Chao Shan Su, Biological and Agricultural Engineering
Lexington, North Carolina
Dissertation: Physical Properties of Cucumber Skin Related to Sand Particle Penetration. (Under the direction of Ervin Grigg Humphries).
- King-Chain Sun, Plant Pathology
Raleigh, North Carolina
Dissertation: Purification and Characterization of a Severe Strain of Peanut Mottle Virus. (Under the direction of T. T. Herbert).
- Larry Moore Sykes, Biological and Agricultural Engineering
Castalia, North Carolina
Dissertation: Sublimation Dehydration of Cured Tobacco Shreds. (Under the direction of William Hugh Johnson).
- William Wallace Taylor, Mathematics
Corpus Christi, Texas
Dissertation: A Theory of Contractive Mappings in Uniform Spaces With Applications in Linear Topological Spaces. (Under the direction of Richard Edward Chandler).
- Joseph Lawrence Norman Violette, Electrical Engineering
Winslow, Maine
Dissertation: Integral Equation Solution for Nonplanar Obstacles in Coaxial Waveguides. (Under the direction of George B. Hoadley and Makoto Itoh).
- Pathe Sesaiaer Vivekananthan, Psychology
Madurai, India
Dissertation: Development of a Planning System for Educational R & D Centers. (Under the direction of Donald William Drewes).

- Richard Allen Werner, Entomology
Mohnton, Pennsylvania
- Dissertation: Studies on the Olfactory Response of *Ips grandicollis* (Eichhoff) (Coleoptera: Scolytidae) to Host- and Insect-Produced Attractants. (Under the direction of Robert T. Yamamoto).
- Joel Lawson Williams, Fiber and Polymer Science
Sarecta, North Carolina
- Dissertation: Preirradiation Grafting to Wool and Cellulosic Fibers. (Under the direction of Vivian Thomas Stannett).
- † Ann Dryden Witte, Economics
Floral City, Florida
- Dissertation: Employment in the Manufacturing Sector of Developing Economies: A Study of Mexico, Peru and Venezuela. (Under the direction of Robert Morcom Fearn and Bernard Martin Olsen).

† In Absentia

DEGREES CONFERRED

July 11, 1970

August 15, 1970

December 21, 1970

School of Agriculture and Life Sciences



BACHELOR OF SCIENCE IN BIOLOGICAL AND AGRICULTURAL ENGINEERING

Jointly Administered by the School of Agriculture and
Life Sciences and the School of Forest Resources

Ray Bernard Killough (December, 1970) Indian Trail
Frederick Alan Tedder (July, 1970) Hallsboro
Wallace Wayne Womble, Jr. (August, 1970) New Hill

BACHELOR OF SCIENCE IN CONSERVATION

Jointly Administered by the School of Agriculture and
Life Sciences and the School of Forest Resources

Parks Vander Blake (December, 1970) Jackson Springs
Neil Joseph Cheney (July, 1970) Redfield, N. Y.
William Neal Conoley, Jr. (December, 1970) Wendell
Norman LeCompte Hill (December, 1970) Kings Mountain
Lewis Brent Lawrence (December, 1970) Raleigh
William Edney Woody (December, 1970) Gastonia

BACHELOR SCIENCE

Agricultural Economics

Hubert Jacob Avery (December, 1970) Crouse
Robert R. Burton (July, 1970) Raleigh
Kenneth Cleveland Culberson (July, 1970) Snow Camp
William Albert Eagles (December, 1970) Crisp

David Michael Harris (December, 1970)	Spring Hope
David James Jackson (July, 1970)	Raleigh
Carl Glenn Kirby (December, 1970)	Goldsboro
Margaret Ann Mason (December, 1970)	Chicago, Ill.
James Thomas Mastin (July, 1970)	Jonesville
David Lane Rodgers (December, 1970)	Monroe
Dennis Virgil Thomas (December, 1970)	New Bern
David Lee Tyre (July, 1970)	Williamston
Barry Lewis Wilson (December, 1970)	Davidson
Dennis Byrl Winters (July, 1970)	Elk Park

Agronomy

Leslie Alston Cutler, Jr. (December, 1970)	Washington
* Jimmy Ransom Journigan (December, 1970)	Red Oak
William Lee Meyer (December, 1970)	Rocky Mount
Stanley Oliver, Jr. (August, 1970)	Creswell

Animal Science

Wilbur Thomas Britt, Jr. (December, 1970)	Garner
Percy Van Craven, Jr. (August, 1970)	Greensboro
James Manuel Jarman, Jr. (December, 1970)	Jacksonville
Henry Boyd Parker, II (August, 1970)	Elizabeth City
William Evander Plummer, Jr. (August, 1970)	Goldsboro

Biological and Agricultural Engineering

Henry Mitchel Callahan (December, 1970)	Vass
Lawrence Alvin Johnson (December, 1970)	Wilson's Mills

Biological Sciences

** Janet Williams Ross (July, 1970)	Greensboro
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Botany

Michael Eugene Bailey (December, 1970)	Raleigh
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Crop Science

Michael Eugene Bailey (December, 1970)	Raleigh
Samuel Dudley Davis (August, 1970)	Pollocksville

Food Science

Glenda Cornatzer Miller (December, 1970)	Advance
Stephen James Stokes (July, 1970)	Winston-Salem
Kenneth Ray Swartzel (December, 1970)	Winston-Salem
Glenn Allen Womble (December, 1970)	Apex

Horticultural Science

Robert William Meador (July, 1970)	Reidsville
James Stephen Revis (December, 1970)	Saluda
Leon Stepp, Jr. (December, 1970)	Dana
Betty Lula Wise (August, 1970)	Newland

* Honors ** High Honors

Soil Science

Dwaine Reeves Brooks (August, 1970)	Sparta
* James Andrew Parker (July, 1970)	Marion

Zoology

Wildlife Biology

Alvin Louis Braswell (December, 1970)	Monroe
John Camden DeVane, Jr. (December, 1970)	Kinston
Calvin Troxler Evans, Jr. (July, 1970)	Lexington
Larry Hugh King (August, 1970)	Liberty
John Charles Sill (December, 1970)	Franklin
Curtis Martin Wooten (August, 1970)	Maple Hill

Zoology

Noni McCullough Bohonak (December, 1970)	Raleigh
**H Linwood Paul Boshier (December, 1970)	Mechanicsville, Va.
Walter Shields Clayton, Jr. (July, 1970)	Brevard
** Edwin Morton Fulghum, Jr. (December, 1970)	Wilson
* Larry Ray Grimes (December, 1970)	Fayetteville
Charlotte Hassett Hain (December, 1970)	Wyomissing, Penna.
Michael Chester Hargett (August, 1970)	Rutherfordton
Nona Lee Hinson (December, 1970)	Rockingham
** Ezra Clay Hodgins, III (July, 1970)	Greensboro
James Oscar Lee (December, 1970)	Sanford
William Joseph Mercer (December, 1970)	Hamlet

School of Education



BACHELOR OF ARTS IN PSYCHOLOGY

** Jacqueline Bartmesser Betel (December, 1970)	Toronto, Canada
Avery Franklin Kendig, Jr. (December, 1970)	Oak Ridge, Tenn.
Meredith Delavergne Roberts (December, 1970)	Salt Point, N. Y.
Charles Stuart Sanford (December, 1970)	Raleigh

BACHELOR OF SCIENCE IN EDUCATION

Agricultural Education

Robert Wayne Long (July, 1970)	Nakina
Maurice Irving McAlister (December, 1970)	Reidsville
John Bert Merritt (August, 1970)	Whiteville

* Honors ** High Honors H Honors Program

Joseph James Morton (August, 1970) Jacksonville
 Clarence Michael Russ (August, 1970) Shallotte
 Harvey Preston Thornton, Jr. (December, 1970) Mount Olive

Industrial Arts Education

Clyde Jay Bridges, Jr. (December, 1970) Kings Mountain
 William James Coston (December, 1970) Hendersonville
 Paul Leonard Dieffenderfer (December, 1970) Durham
 Kenneth Jon Karmazyn (December, 1970) Clark, N. J.
 Thomas Riley Palmer (July, 1970) Asheville
 Edward Ralph Schwerin, Jr. (December, 1970) Raleigh

Mathematics Education

Harold David Bryant (December, 1970) Bunn
 Gerard Furman Dowd, III (December, 1970) Garner
 Wade Judson Harward, Jr. (December, 1970) Raleigh
 * Patsy Parrish Hester (December, 1970) Raleigh
 Nellie Wood Hounsell (December, 1970) Edenton
 Stanley Mack Moser (December, 1970) Ramseur
 Jack Victor Mundy (December, 1970) Lexington
 Glenda Williams Nordan (December, 1970) Hickory
 Alden Aaron Rumpfelt (December, 1970) Asheboro
 Robert Wayne Stefansky (December, 1970) Fayetteville
 Dudley Carroll Vann (December, 1970) Pendleton
 Gregory Baxter White (December, 1970) Hamilton

Science Education

John Edwin Adams, Jr. (December, 1970) Asheboro
 Doris Hildebrand Carlton (December, 1970) Raleigh
 Kenneth Cleophas Hamrick (December, 1970) Kings Mountain
 Olivia Mae Hurd (December, 1970) Sanford
 Sidney Garfield Luck (December, 1970) Seagrove
 * Carroll John Painter (December, 1970) Lincolnton

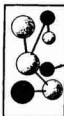
Technical Education

Joseph Thurman Amos, Jr. (December, 1970) Raleigh
 John Edward Gilmore, Jr. (August, 1970) Chapel Hill
 Eric Ballantine McKeithan (August, 1970) Abbottsburg

BACHELOR OF SCIENCE IN INDUSTRIAL ARTS

Patrick Delano Osburn (December, 1970) Garner

* Honors



BACHELOR OF SCIENCE IN AEROSPACE ENGINEERING

Ronald Knox Carden (August, 1970)	Durham
Edward Carlisle Carson, Jr. (July, 1970)	Chapel Hill
James Thomas Grissom (August, 1970)	Raleigh
David Dewitt Hoots (December, 1970)	Hendersonville
Lawrence Joseph Horton (December, 1970)	Asheville
* Burton Avery Johnson (July, 1970)	Littleton, Colo.
Harold Claus Jurgensen (July, 1970)	Fayetteville
William Eugene Mashburn (July, 1970)	Franklin
Robert Anthony Mineo (July, 1970)	Jacksonville

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Lemia Clarence Batts, Jr. (August, 1970)	Rose Hill
John Gordon Glass (December, 1970)	Poughkeepsie, N. Y.
Mohammed Ishaq Haider (December, 1970)	Kabul, Afghanistan
Kurt Kauffman (August, 1970)	Manheim, Penna.
Ronald Alvis King (July, 1970)	Seagrove
Tomas Abelardo Loreda (December, 1970)	Falls Church, Va.
Clinton Douglas Moore (August, 1970)	Brevard
Johnnie Leonard Pearson (December, 1970)	Severna Park, Md.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

John Davis Birmingham (December, 1970)	Charlotte
Neal Andrew Brown (August, 1970)	Lillington
Speros John Fleggas (December, 1970)	Charlotte
Laddie Brown Griffin (December, 1970)	Sanford
William Leslie Hall, Jr. (December, 1970)	Stedman
John Whitmol Hayes, Jr. (December, 1970)	Louisburg
Rodney Alan Hughes (July, 1970)	Winston Salem
Ralph Samuel Jarvis (August, 1970)	Bath
Gary Linwood Jones (August, 1970)	Elizabeth City
James Andrew Ledford (December, 1970)	Charlotte
* William Hilray Lindsay (December, 1970)	Gastonia
Garland Eugene Midyette, Jr. (December, 1970)	Raleigh
William Edward Mitchell (December, 1970)	Leaksville
Thomas Meredith Pridgen (July, 1970)	Charlotte
Phillip Lee Stanley (August, 1970)	Warrensville
Richard Rodgers Snyder (December, 1970)	Lock Haven, Penna.
Joseph Martin Thompson (December, 1970)	Troy
Murray Daniel Thornburg, Jr. (July, 1970)	Fort Lauderdale, Fla.
Larry Joe Williams (December, 1970)	Monroe

* Honors

**BACHELOR OF SCIENCE IN CIVIL ENGINEERING,
CONSTRUCTION OPTION**

James Steven Booker (December, 1970)	Greensboro
Martin Glenn Cieszko (July, 1970)	Havelock
Otis Algernon Crowder (December, 1970)	Charlotte
Robert Earl Crumpler (December, 1970)	Clinton
Teddy James Geddis (December, 1970)	Burlington
Larry Neil Gordon (August, 1970)	Monroe
Edgar Eric Hedgecock (August, 1970)	High Point
Samuel Finch Jones (July, 1970)	Charlotte
Robert Lee Powell (December, 1970)	Clemmons
Richard Henry Rankin (December, 1970)	Belmont
Kenneth Gary Simmons (December, 1970)	Burlington
William Thomas Underwood (December, 1970)	Clinton

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Ronald Earle Brady (December, 1970)	Salisbury
Jeffrey Ford Eastman (December, 1970)	Stanford, Calif.
Melvin Thomas Edwards (August, 1970)	Winston-Salem
Richard Wayland Eller (August, 1970)	Winston-Salem
Carlos Jose Fernandez (July, 1970)	Bogota, Colombia, S. A.
* Ronald Thomas Gross (August, 1970)	Cleveland, Ohio
Frank Edward Harlan, III (December, 1970)	Charlotte
Frederick Keith Haywood (December, 1970)	Ellerbe
Shang Hwang Hsiung (December, 1970)	Raleigh
Travis Lawrence Jackson (December, 1970)	Marion
Mahendra Valamji Karia (December, 1970)	Bombay, India
Donald Wayne Kilpatrick (December, 1970)	Swannanoa
* Dan James Lawson, Jr. (December, 1970)	Charlotte
David Eldon Lawson (December, 1970)	Hickory
Winston Reeves Lear (December, 1970)	Elkin
Davey Lee (December, 1970)	Durham
Robert Martin Lewis (December, 1970)	Morris Plains, N. J.
* Stephen Dale Moore (December, 1970)	Red Oak
Ralph Mackey Powers (December, 1970)	Moyock
John Leonard Prichard (August, 1970)	Raleigh
James Edward Reece (December, 1970)	Boonville
Ewell Timothy Robeson (August, 1970)	Dublin
* John Vernon Sadler (December, 1970)	Raleigh
Thomas Edward Stammely (July, 1970)	Johnstown, Penna.
* Wendell Allen Strickland (July, 1970)	Marion
* Dean Orville Trytten (December, 1970)	Lake Mills, Iowa
Robert William Via (December, 1970)	Eden
Joel James Watson (December, 1970)	Raleigh
Daryl Connelly West (December, 1970)	Roaring River
Garthae Burrell Williams (December, 1970)	Dunn
James McClure Wilson (July, 1970)	Greensboro
Charles Jonathan Woodley (December, 1970)	Asheboro
Anthony Michael Zizolfo (December, 1970)	Elmont, N. Y.

* Honors

BACHELOR OF SCIENCE IN ENGINEERING OPERATIONS

Walter Moore Altman, III (December, 1970)	Hopewell, Va.
Philip Ray Angevine (December, 1970)	Verona, N. J.
James Ira Avett, III (December, 1970)	Norwood
Henry Curtis Blake (August, 1970)	Durham
Wayne Wilson Boys (December, 1970)	Jacksonville
Raymond Harvey Bradley (December, 1970)	Gastonia
Donald Richard Brennan (December, 1970)	Binghamton, N. Y.
Frank Otto Calohan, III (August, 1970)	Godwin
Jose Victor Carvajales (August, 1970)	Barranquilla, Colombia, S. A.
Fredrick Leonard Connell, Jr. (December, 1970)	Charlotte
Charles Walton Darden (December, 1970)	Raleigh
Danny Ray Darnell (December, 1970)	Elkin
James Earl Dickinson (December, 1970)	Beaufort
Stephen Lynn Dickson (July, 1970)	Gastonia
Thomas Bagley Foley, Jr. (December, 1970)	Burlington
Victor Alan Foushee (December, 1970)	Charlotte
John George Fragakis (July, 1970)	Charlotte
Jerry Wayne Fuller (July, 1970)	Durham
Lance Scott Galvin (December, 1970)	Rochester, N. Y.
Kokheng Goh (July, 1970)	Bangkok, Thailand
Larry Dozier Griffith (December, 1970)	Lexington
Duane Clinton Harrelson (December, 1970)	Tabor City
Michael Houston Harrison (December, 1970)	Salisbury
John Dexter Hornaday, Jr. (July, 1970)	Fayetteville
James Porter Hunt, II (December, 1970)	Atlanta, Ga.
Thomas Morrison Hutchison (August, 1970)	Charlotte
Gary Robert James (December, 1970)	Greensboro
Macon Edward Jones (December, 1970)	Huntington, W. Va.
Donald Ray Key (August, 1970)	Pilot Mountain
Walter Travis Latham (August, 1970)	Pinetown
David Andrew Lindley (December, 1970)	Greensboro
William Harry Livingston, II (December, 1970)	Newport
David Lewis Lollar (August, 1970)	Jacksonville
Roger Hornsby McKee, Jr. (December, 1970)	Shelby
William Hamilton McRae (December, 1970)	High Point
Robert Steven Matheson (December, 1970)	Shelby
John Dawkins Medlin, Jr. (December, 1970)	Goldsboro
John Calvin Messick (December, 1970)	Winston-Salem
Ralph Lawrence Meyer (August, 1970)	Mocksville
Michael Wayne Misenheimer (July, 1970)	Rockwell
* James Douglas Moretz (August, 1970)	Sanford
St. Clair Vance Nordan, Jr. (July, 1970)	Raleigh
Walter Robert Pfister (August, 1970)	Waxhaw
Raleigh Eugene Phelps, Jr. (July, 1970)	Richmond, Va.
Amos Warren Phillips, Jr. (August, 1970)	New Bern
Sam Buck Rhodes, III (July, 1970)	Eden
Willie Roberson, Jr. (July, 1970)	Durham
Edwin Warren Small (July, 1970)	Concord
John Frederick Swinson (December, 1970)	Charlotte
Robert Henry Taylor (December, 1970)	Marion
George Edward Tingen (December, 1970)	LaGrange

* Honors

Gerald Michael Truelove (December, 1970)	Apex
Leiva Urman (December, 1970)	Lima, Peru
Owen Bruce Vaughan (August, 1970)	Scotland Neck
Lynn Alan Wilson (December, 1970)	Goldsboro
Tony Lee Winstead (August, 1970)	Mount Olive

BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING

* Jeffrey Wright Donovan (December, 1970)	Southern Pines
Lewis Monroe Johnson (August, 1970)	Charlotte
Marvin Russell Payne (August, 1970)	Burlington

BACHELOR OF SCIENCE IN MATERIALS ENGINEERING

Thomas David Brechtlein (December, 1970)	Wilmington
Lyman Wainwright Emory (July, 1970)	Waynesville

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

* Dale Eugene Black (July, 1970)	Eric, Penna.
Rees Mayrant Brody (August, 1970)	Charlotte
Frederick Everett Byerly (July, 1970)	Winston-Salem
Lawrence Douglas Carter (July, 1970)	Greensboro
Richard Mello Clark (July, 1970)	Raleigh
Charles Franklin Crowell (July, 1970)	Salisbury
Lawrence Robert Fishman (July, 1970)	Greensboro
David Randall Glass (December, 1970)	Taylorsville
Clyde Peebles Harris, Jr. (July, 1970)	Wilson
Lawrence Walter Hubis (December, 1970)	Wilmington
Thomas Allen Laws (July, 1970)	Pleasant Garden
Kenneth Young Miller (July, 1970)	Mocksville
Jonathan Freer Lown (August, 1970)	Kingston, N. Y.
Booker Telfaria McRae, Jr. (August, 1970)	Red Springs
* Larry Clifford Rash (December, 1970)	Newport News, Va.
* Joseph Franklin Rose (July, 1970)	Roanoke Rapids
Charles Ray Searcy (August, 1970)	Raleigh
Alden Maurice Segrest (July, 1970)	Charlotte
Charles Wayne Stanley (December, 1970)	Morhead City
James Donald Sullivan (August, 1970)	Wilmington
Marshall Scott Trantham (August, 1970)	Lexington
Gary William Wyrick (August, 1970)	Greensboro

BACHELOR OF SCIENCE IN NUCLEAR ENGINEERING

James Michael Reavis (August, 1970)	Yadkinville
Robert Taylor Rice (July, 1970)	Aurora
Norman Cornelius Shepard, III (July, 1970)	Smithfield
Carroll Bennett Sparks (July, 1970)	Greenville, S. C.
Ronald Melville Young (August, 1970)	New Bern

* Honors



BACHELOR OF SCIENCE IN CONSERVATION

Jointly Administered by the School of Forest Resources and the
School of Agriculture and Life Sciences

Thomas Mitchell Hardee (December, 1970)	.....	Oxford
Sandra Lea Horton (December, 1970)	.....	Wendell
Eugene Wayne Jeffreys (December, 1970)	.....	Raleigh
Thomas Edward Starkey (December, 1970)	.....	Pennsauken, N. J.

BACHELOR OF SCIENCE IN FORESTRY

William Earl Cheesman (December, 1970)	.....	Cambridge, Md.
William Robert Coleman (December, 1970)	.....	Dallas
James Tony Cowan (December, 1970)	.....	Williamston
Johnny Preston Greene, Jr. (August, 1970)	.....	Burlington
Thomas Mitchell Hardee (December, 1970)	.....	Oxford
Rodney Steven Huffman (July, 1970)	.....	Purlear
George Roman Knies (December, 1970)	.....	Jasper, Ind.
Harry Vernon Maples (December, 1970)	.....	Hamlet
* Donald Patrick Lee (July, 1970)	.....	Winston-Salem
* James Franklin Naylor, Jr. (July, 1970)	.....	Winston-Salem
James Ira Sitts (December, 1970)	.....	Gloversville, N. Y.
Thomas Edward Starkey (December, 1970)	.....	Pennsauken, N. J.
John William Stine (July, 1970)	.....	Aberdeen, Md.
Somkuan Switchart (August, 1970)	.....	Bangkok, Thailand
Thomas Szygula (December, 1970)	.....	Millville, N. J.
Ebrahim Tavassoli (December, 1970)	.....	Dezful, Iran
Walter Edwin Thomas (December, 1970)	.....	Bridgeton
Christopher Williams, Jr. (December, 1970)	.....	Maiden
Howard Colon Williams (December, 1970)	.....	Winston-Salem
Barry Lewis Wilson (December, 1970)	.....	Davidson

BACHELOR OF SCIENCE IN NATURAL RESOURCES RECREATION MANAGEMENT

Carlton Richard Doby (December, 1970)	.....	Salisbury
Sandra Lea Horton (August, 1970)	.....	Wendell
* Robert Allan Marker (August, 1970)	.....	Montclair, N. J.
Clay Randall Rosenbarker (August, 1970)	.....	Newark Valley, N. Y.
John Neal Tucker, Jr. (December, 1970)	.....	Lawsonville
Rollin Edgerton Woolley (August, 1970)	.....	Newport News, Va.

* Honors

**BACHELOR OF SCIENCE IN PULP AND PAPER SCIENCE
AND TECHNOLOGY**

Ernest Edward Howard, Jr. (December, 1970)Georgetown, S. C.
Leon Wayne Owen (July, 1970)Brevard

**BACHELOR OF SCIENCE IN RECREATION AND PARK
ADMINISTRATION**

Lee Richard Anheuser (December, 1970) Milwaukee, Wis.
Ronald Lane Austin (December, 1970) Charlotte
Pleasant Arthur Brown (July, 1970) Cleveland
Charles McKinley Elam (December, 1970)Huntington, W. Va.
James Douglas Elliott, Jr. (December, 1970) Edenton
Diann Frances Gersch (August, 1970) Raleigh
*H Bruce Alan Gollnick (December, 1970)New Egypt, N. J.
Junius Glenn Lee (July, 1970) Benson
Phil Franklin Martin (August, 1970) Jonesville
Carey Gregory Metts, III (December, 1970) Greensboro
Edward Joseph Nicholas, Jr. (December, 1970) Warren, N. J.
Thomas Joseph Ostrom (August, 1970) Binghamton, N. Y.
James Edwin Pace, Jr. (December, 1970) Cary
Teddy Ronald Privette (December, 1970) Zebulon
Andrew Stanley Solowoski, Jr. (December, 1970) Hazleton, Penna.
Jerry Wilson Triplett (August, 1970) Granite Falls
Susan Bruffey Vestal (July, 1970) Kinston
William Edward Wellman (August, 1970) Clemmons
George Michael Whitby (December, 1970) Roanoke Rapids
Eugene Francis Whitley (December, 1970) Greensboro
William Arlon Williams (August, 1970) Massillon, Ohio
Frederick Hugh Wilson, Jr. (December, 1970) Henderson

BACHELOR OF SCIENCE IN WOOD SCIENCE AND TECHNOLOGY

Denis Authier (December, 1970)Granby, Quebec Canada
Dwight Elliott Bullock (July, 1970)Greenville
John DeVere Matson (August, 1970)Brookville, Penna.
Ronald Lee Thomas (December, 1970)Sanford

School of Liberal Arts



BACHELOR OF ARTS

* Janet MacGregor Alford (July, 1970) Falls Church, Va.
** Elizabeth Prince Allen (December, 1970) Charlotte
Fred Cameron Bailey (December, 1970) Benson

* Honors ** High Honors H Honors Program

James Carr Barrow (December, 1970)	.....	Snow Hill
Edward Johnston Baysden (July, 1970)	.....	Rocky Mount
Janice Carter Blair (December, 1970)	.....	Raleigh
Thomas Alan Blocker (August, 1970)	.....	Cary
James Jordan Bonner (August, 1970)	.....	Hertford
George John Botsko, Jr. (December, 1970)	.....	Ambridge, Penna.
Joseph Harry Bryan (December, 1970)	.....	Henderson
Marie Susanne Bryant (August, 1970)	.....	Butner
Larry Wayne Cagle (July, 1970)	.....	Thomasville
Rodney Douglas Caldwell (July, 1970)	.....	Bluefield, W. Va.
John Mattocks Cannon, Jr. (December, 1970)	.....	Raleigh
Larry Raymond Carlson (August, 1970)	.....	Raleigh
Richard Wallace Carr (July, 1970)	.....	Potomac, Md.
Bernard Stanley Clarke, Jr. (December, 1970)	.....	Petersburg, Va.
* Nelda Holder Clemmons (December, 1970)	.....	Garner
Douglas Kenneth Cooper (July, 1970)	.....	Willow Grove, Penna.
Stephen Mozley Cooper (July, 1970)	.....	Tarboro
* Jerry Wayne Cotten (July, 1970)	.....	Moncure
Louis Atwill Covey, Jr. (August, 1970)	.....	Fayetteville
Harriette McKinnon Crump (December, 1970)	.....	Enfield
Ronald Blaine Dailey (July, 1970)	.....	Raleigh
John Russell Daniel (December, 1970)	.....	Oxford
** David Kenneth Danklefs (December, 1970)	.....	Raleigh
** Virginia Marie Deane (August, 1970)	.....	Fayetteville
Carl Dawson Delamar, Jr. (August, 1970)	.....	Durham
* Danilo Antonio Di Bert (August, 1970)	.....	Fayetteville
* Garry Lee Dornburg (December, 1970)	.....	Raleigh
Cynthia McDonough Edson (August, 1970)	.....	Raleigh
Barry Michael Edwards (July, 1970)	.....	Rich Square
Charles Eccles Elliott (December, 1970)	.....	Charlotte
* Susan Sidenberg Emma (December, 1970)	.....	Wake Forest
Ralph William Enlow (August, 1970)	.....	Fayetteville
Judy Kathleen Heine (August, 1970)	.....	Raleigh
Thomas Mark Herring (August, 1970)	.....	Wilson
William Stanley Fishel (December, 1970)	.....	Raleigh
Earl Thomas Flinchum, Jr. (July, 1970)	.....	Germanton
Robert Angell Ford (December, 1970)	.....	Concord
William Spach Ford (July, 1970)	.....	Winston-Salem
Brenda Gayle Foreman (December, 1970)	.....	Wilmington
Douglas Radeliffe Franklin (December, 1970)	.....	Franklin
Martha Blackwell Galvin (December, 1970)	.....	Asheville
Johnny Sherwood Gaskins (December, 1970)	.....	Frisco
Nadine Marie Gay (December, 1970)	.....	Zebulon
James Emory Gibson, III (December, 1970)	.....	High Point
Jane Elizabeth Green (December, 1970)	.....	Fort Huachuca, Ariz.
Thomas Clinton Griffin (December, 1970)	.....	Fleetwood
David Harlow Harman (December, 1970)	.....	Blowing Rock
Olivia Ann Hassler (December, 1970)	.....	Raleigh
Allen Milton Hicks, Jr. (December, 1970)	.....	Pikeville
Paul Sears Hollis (December, 1970)	.....	Belle Terre, N. Y.
Michael Alan Hoyng (December, 1970)	.....	Greensboro
Deborah Lewis Hylter (December, 1970)	.....	Cary

* Honors ** High Honors

**	Loretta Harper Jividen (August, 1970)	Raleigh
	Joanne Ruark Juby (December, 1970)	Raleigh
	Nancy Redman Katz (July, 1970)	Sierra Madre, Calif.
	Robert Maxwell Kelley, Jr. (December, 1970)	Charlotte
	William Reavis Kurdys (July, 1970)	Raleigh
	Roslyn Beth Fleishman Lasar (December, 1970)	Fayetteville
	Tov James Lathan (July, 1970)	Wilmington
	Clifton Roger Lewis (July, 1970)	Greensboro
*	John Charles Link (December, 1970)	Raleigh
**	Nancy Smith Linticum (August, 1970)	Raleigh
*	Lee Dawson Lovvorn (December, 1970)	Raleigh
	Robert Stephen Lowther (December, 1970)	Raleigh
	Robert John McGarvey (December, 1970)	Raleigh
	Robert Jonathan McKinnon (December, 1970)	Charlotte
**	Odile Fonlquie Maher (December, 1970)	Paris, France
	Rebecca Smith Mangum (December, 1970)	Angier
*	Robert Stephen Matson (December, 1970)	Raleigh
*	Donna Lee Matthews (December, 1970)	Fayetteville
	Lawrence Douglas Mercer (July, 1970)	Wilson
	Charles David Miller (July, 1970)	Lexington
	Richard Wayne Miller (December, 1970)	Winston-Salem
	Robert Charles Mize (December, 1970)	Sanford
	Darrell Lee Moody (December, 1970)	Asheboro
	Robert Steven Moody (July, 1970)	Raleigh
	Anne Rogers Moore (August, 1970)	Greenville
	Eric Nichols Moore (December, 1970)	Durham
	Joseph Gilbert Moore (July, 1970)	Raleigh
	Charles Ivan Mothershead, III (August, 1970)	Greensboro
	Marcia Ouzts Musselwhite (December, 1970)	Lumberton
*	William Greg Myers (December, 1970)	Thomasville
	George Harrison Panton (December, 1970)	Raleigh
	Margaret Hinson Parker (December, 1970)	Raleigh
	William Henry Payne, Jr. (December, 1970)	Raleigh
	George Albert Penney (August, 1970)	Raleigh
	Robert Allen Perkins (December, 1970)	Winston-Salem
	Herbert Wayne Perry (December, 1970)	Colerain
*	Charlene Jones Pippen (December, 1970)	Elizabeth City
	Rudolph Enrique Pique (December, 1970)	Raleigh
	Daniel Pon, Jr. (December, 1970)	Glen Cove, N. Y.
	Byron Clifton Potter (December, 1970)	Orlando, Fla.
	David Paul Powers (December, 1970)	Siler City
—	Vicky Carol Franklin (August, 1970)	Buies Creek
	Susan Quast (December, 1970)	Milwaukee, Wis.
	Michael John Ramee (December, 1970)	Savannah, Ga.
	Joseph DeWitt Regan (August, 1970)	Alexandria, Va.
**	Sara Slife Reilly (August, 1970)	Houston, Texas
<i>Residence</i>	Hardwicke Reynolds (August, 1970)	Raleigh
	Richard Alan Rhine (August, 1970)	Doylestown, Penna.
	Barry Lynn Rhudy (August, 1970)	Winston-Salem
	Thomas Reid Rickman (August, 1970)	Raleigh
	Herbert Elmo Roberts, Jr. (December, 1970)	Statesville
	Stephen Troy Roundy (December, 1970)	New Hill

* Honors ** High Honors

Elbert Geroud Rudasill (December, 1970)	Shelby
Fernando Ricardo Salas (December, 1970)	Fayetteville
Helen Lamb Schwall (December, 1970)	San Jose, Calif.
Frederick Jacob Sieber (December, 1970)	Falls Church, Va.
Peter James Skalchunes (December, 1970)	Greensboro
John Olly Slater (December, 1970)	Rocky Mount
Irvin Duval Smith (December, 1970)	Southport
Jarvis Wilton Smith (December, 1970)	Raleigh
* Patsy Carden Smith (December, 1970)	Fuquay-Varina
Richard Paul Starodub (December, 1970)	South River, N. J.
* Elizabeth Donohoe Steinberger (December, 1970)	Raleigh
Timothy Michael Stokes (December, 1970)	Kannapolis
* Marie Anne Sutherland (July, 1970)	Raleigh
** Gloria Jean Sweet (August, 1970)	Chicago, Ill.
Ann Windle Turner (August, 1970)	Raleigh
Mary Evelyn Tyson (December, 1970)	Farmville
Leiva Urman (December, 1970)	Lima, Peru
Linda Wade Waleski (July, 1970)	Bassett, Va.
Robert Lee Walkup (August, 1970)	Raleigh
Harold Nicholas Way (December, 1970)	Burlington
** Lois Pope Webster (July, 1970)	Bloomington, Ind.
Richard Ronald Wells (July, 1970)	Asheville
* Fred Hancock Whitehurst, II (December, 1970)	New Bern
Lawrence Edward Williamson (August, 1970)	Rutherfordton
Efrain Zambrana (December, 1970)	Cary
** Joan Marie Zicherman (July, 1970)	New York City, N. Y.

BACHELOR OF SCIENCE

Howard Bruce Pate, Jr. (December, 1970)Spring Lake

School of Physical and Mathematical Sciences



BACHELOR OF SCIENCE IN APPLIED MATHEMATICS

Michael Francis Archie (July, 1970)	Wilson
Jeffrey Britt Barnes (July, 1970)	Winston-Salem
**H Benjamin Clay Burch (December, 1970)	Grifton
* George Franklin Bowie, III (July, 1970)	Raleigh
Dee Ann Chiswell (December, 1970)	Wilmington, Ohio
Nancy Yoder Cilley (December, 1970)	Hickory
Michael Frank Cook (July, 1970)	Charlotte
Thomas Haywood Knight (December, 1970)	Durham
Arthur Lee Madeley, Jr. (December, 1970)	Wilmington

* Honors ** High Honors H Honors Program

Sidney Houston Marsh (August, 1970)	Greensboro
Charlie Edgar Minton, Jr. (December, 1970)	North Wilkesboro
Deborah Bagley Mobley (August, 1970)	Williamston
Peter Mueller (August, 1970)	Asheboro
Mohammed Saber Musazay (December, 1970)	Kohdamen, Afghanistan
Ronald James Roberts (December, 1970)	Boonville
Mary Suzanne Welch (July, 1970)	High Point

BACHELOR OF SCIENCE IN CHEMISTRY

Floyd Eugene Quick (August, 1970)	Franklinton
Thomas Henry McSwain (July, 1970)	Albemarle
Carlton Thomas Niessner (December, 1970)	Southern Pines

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Charles Warren Huneycutt (December, 1970)	High Point
Darwin McCaslin Ikarf, Jr. (July, 1970)	Maiden
Francis Frederick Kraft (December, 1970)	Mount Olive
Alfred Scales Linthicum, III (December, 1970)	Raleigh
John Clegg Lockhart, III (December, 1970)	Oreland, Penna.
Ratnaprabha Shankerbhai Patel (December, 1970)	India
Richard McCoy Poston (December, 1970)	Rockingham
Ralph Macon Sanford (December, 1970)	Norfolk, Va.
Charles Ray Thomas (August, 1970)	Cary
** Maxine Harriet Weimer (December, 1970)	Raleigh
Courtney Evan Williams (December, 1970)	Key West, Fla.

BACHELOR OF ARTS IN GEOLOGY

Fairley Louis Long (December, 1970)	Raleigh
Donald Wright Selby (December, 1970)	Jacksonville

BACHELOR OF SCIENCE IN GEOLOGY

Carlton Thomas Niessner (December, 1970)	Southern Pines
Bobby Roscoe Wilson (August, 1970)	Pittsboro

BACHELOR OF SCIENCE IN PHYSICS

* Arthur Cecil Ball (July, 1970)	Raleigh
George Richard Scott, Jr. (August, 1970)	Charlotte
David Daniel Vaughn (December, 1970)	Fayetteville

BACHELOR OF SCIENCE IN STATISTICS

Jeffrey Mark Isley (December, 1970)	Haw River
Michael Edward Baxter (July, 1970)	Burlington
** Eric Peter Plow (July, 1970)	Asheville

* Honors ** High Honors



BACHELOR OF SCIENCE IN TEXTILE CHEMISTRY

- * Thomas Pak Sun Cheung (December, 1970) Hong Kong
 Joseph Radford Peedin (December, 1970) Selma

BACHELOR OF SCIENCE IN TEXTILE TECHNOLOGY

- Isadore Tommy Arakas (December, 1970) Asheville
 Paul Wellington Baker, Jr. (December, 1970) Charlotte
 Joseph Fred Bell (August, 1970) Hendersonville
 Larry Mose Bowers (July, 1970) Norwood
 Chi-Hsiang Chang (December, 1970) Taiwan, China
 Nelson Kiser Coffey (December, 1970) Lincolnton
 James Edward Dailey (July, 1970) Raleigh
 ** Niranjan Desai (July, 1970) Ontario, Canada
 Harold Powell Dew (July, 1970) Drakes Branch, Va.
 Gary Braxton Foust (December, 1970) Snow Camp
 Thomas Calvin Furr (August, 1970) New London
 Joel Sylvanus Gardner (December, 1970) New Bern
 James Daly Hardy (August, 1970) LaGrange
 Robert Wingate Harris (December, 1970) Candor
 Charles Windsor Hathcock (December, 1970) Badin
 Terry Douglas Holmes (December, 1970) Elizabeth City
 Wayne Thomas Kearney (July, 1970) Henderson
 Terry Lee Kirby (July, 1970) Asheville
 James Lenford Lemons (December, 1970) Eden
 Tony McRae Leonard (December, 1970) Grifton
 William Thompson Lewis (December, 1970) Beaufort
 Harold Edward Luck (December, 1970) Asheboro
 Emmett Jerome Mashburn (December, 1970) Waynesville
 * James Harvey Mason (August, 1970) Forest City
 Eduardo Andres Massu (December, 1970) Santiago, Chile
 ** Jashawant Jamanadas Modi (December, 1970) Gujarat, India
 * Shu Chun Pang (December, 1970) Hong Kong
 Joseph Radford Peedin (December, 1970) Selma
 Larry Millan Plyler (December, 1970) Wadesboro
 Paul Wayne Proctor (December, 1970) Raleigh
 Daryl Fulton Rudd (July, 1970) Greensboro
 * Kshitish Madanmohan Shah (August, 1970) Ahmedabad, India
 ** Mahesh J. Shah (December, 1970) Ahmedabad, India
 Ray Melvin Shearin, Jr. (August, 1970) Warrenton
 Charles Thomas Sutherland (July, 1970) Greensboro
 John Thomas Suttle (July, 1970) Shelby

* Honors ** High Honors

Jerry Dean Tilley (August, 1970)	.....	Ararat
Terrence Patterson Topp (August, 1970)	.....	Nashville, Tenn.
William Beasley Venable (August, 1970)	.....	Greensboro
David Henry Warlick (December, 1970)	.....	Granite Falls
Floyd Dewey Warren, Jr. (July, 1970)	.....	Goldsboro

Professional Degrees



CIVIL ENGINEER, STRUCTURAL OPTION

John Terry Clegg (July, 1970) Tampa, Fla.

MECHANICAL ENGINEER

Rashmikant Thakorlal Brahmhatt (August, 1970) Baroda, India
 Kwong Chony Kam (December, 1970) Hong Kong
 Surendra Ishwarbhai Patel (December, 1970) Baroda, India

Masters Degrees



MASTER OF AGRICULTURE

Said Kertoatmodjo Abdul Rachman (December, 1970) East Java, Indonesia
 Antonio Chavez (August, 1970) Arequipa, Peru
 William L. Coffindaffer (December, 1970) Kincheloe, W. Va.
 Billy F. Headden (July, 1970) Yorkville, Tenn.
 John Daniel Helm, III (August, 1970) Lancaster, Penna.
 Keith Symmers Williamson (July, 1970) Darlington, S. C.

MASTER OF APPLIED MATHEMATICS

Salvatore Julius Bavuso (July, 1970) Hampton, Va.
 Eric Myrn Hill (August, 1970) Kingsport, Tenn.
 Richard Paul Metzger (December, 1970) Springfield, Ohio

MASTER OF ARCHITECTURE

James Earle Bruce (December, 1970)	Greenville, S. C.
Henry King Burgwyn (July, 1970)	Murfreesboro
Rajesh Chander Jain (July, 1970)	Greensboro

MASTER OF BIOCHEMISTRY

Joseph Attilio Aprile (August, 1970)	New York, N. Y.
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MASTER OF BIOMATHEMATICS

Duncan Calvin McCormick (December, 1970)	Raleigh
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MASTER OF CIVIL ENGINEERING

Raymond Douglas Gillis (August, 1970)	Raleigh
Edward Wygant Gray, Jr. (August, 1970)	Lakewood, Colo.
Callaway Boone Hagar (July, 1970)	Raleigh
Frank Roseman Hand, Jr. (July, 1970)	Greensboro
Herbert Rooney Malcom, Jr. (December, 1970)	Raleigh
Marcel Francis Reynolds (July, 1970)	Iron Mountain, Mich.
Samia Galal Abdel-Hamid Saad (July, 1970)	Alexandria, Egypt
Charles Plater Turner, III (December, 1970)	River Edge, N. J.
Lawrence Allen Twisdale, Jr. (July, 1970)	Hickory
Douglas David Vaughn (December, 1970)	Kannapolis
Yue Lun Yee (July, 1970)	Hong Kong

MASTER OF ECONOMICS

Jan-Erik Bjaresten (August, 1970)	Ostersund, Sweden
Barbara Helde Brogan (July, 1970)	Yonkers, N. Y.
Warren Peter George Freas, III (December, 1970)	Raleigh
Gustavo Gonzalez (August, 1970)	Lima, Peru
Billy Ray Hall (August, 1970)	Mount Olive
James Vincent Higgins (December, 1970)	Raleigh
Hayden Sampson Horne, Jr. (August, 1970)	Fayetteville
Eugene Alexander Jackson (July, 1970)	Cary
Jacob William Lackey (December, 1970)	Statesville
Kenneth Peter Ray (December, 1970)	Raleigh
David Patrick Rochester (July, 1970)	Clemson, S. C.
Robert M. Spann (August, 1970)	Closter, N. J.
Phillip Edward Stephens (December, 1970)	Fuquay-Varina
Roberto Castro Suarez (August, 1970)	Jauja, Peru
Paulo Roberto Vianna (July, 1970)	Rio de Janeiro, Brazil

MASTER OF EDUCATION

Adult and Community College Education

Jane Crawford Arndt (July, 1970)	Morganton
Vincent Harold Connolly (December, 1970)	Southern Pines
Linda Kathryn Gallehugh (December, 1970)	Raleigh
Nancy Ricker High (August, 1970)	Winston-Salem
Panya Hiranrusme (December, 1970)	Bangkok, Thailand
Nelda Kay Howell (August, 1970)	Hubert

Charles Conoly Jackson (December, 1970)	Dobson
Evelyn Smith Jernigan (August, 1970)	Raleigh
Triza Pinheiro Lins (December, 1970)	Joao Pessoa, Brazil
Rachel Buchanan Nash (December, 1970)	Wake Forest
Mary Lou Pate (July, 1970)	Fairmount, Ill.
Hiram Perkinson, III (December, 1970)	Norlina
Chuan Sa-Ardpong (December, 1970)	Ayuthya, Thailand
Sherman Norman Shelton (August, 1970)	Hillsborough
John Alan Shephardson (July, 1970)	Elmira, N. Y.
Miriam Robanna Sumrell (July, 1970)	Virginia Beach, Va.
Carolyn Ann Travers (December, 1970)	Bladensburg, Md.

Agricultural Education

Elton Lamont Futrell (August, 1970)	Goldsboro
Clint Luther Hege (July, 1970)	Norlina
Travis Edward Hendren (July, 1970)	Cleveland
Larry Edward Johnston (December, 1970)	Pearisboro, Va.
James Willis Lawson (August, 1970)	Lumberton
Somba Maurits Siahaan (December, 1970)	Meden, Indonesia
John Adrian Worthington (December, 1970)	Pink Hill

Guidance and Personnel Services

Pattie Flowers Bass (August, 1970)	Cary
Robert Eugene Bridges (August, 1970)	Raleigh
Brenda Dunn Byrd (August, 1970)	Cary
Marie Watkins Capel (August, 1970)	Raleigh
Valerie Snook Cooper (August, 1970)	Raleigh
Brenda Joyce Cribb (August, 1970)	Raleigh
Martha Barber Doshier (July, 1970)	Raleigh
John Taylor Fernald (July, 1970)	Autryville
Jane Craig Fields (July, 1970)	Pikeville, Ky.
Pearl Lamm Finch (August, 1970)	Bailey
Bettye Whitehurst Greger (December, 1970)	Raleigh
Harvey Douglas Harris (August, 1970)	Oxford
Jean Noggle Harris (December, 1970)	Cary
Linda Fay Holder (August, 1970)	Wilmington
Jerry Michael Lenn (December, 1970)	Springfield, Va.
Donald Alexander McCaskill (August, 1970)	Carthage
Nathaniel Clayton McNair, Jr. (August, 1970)	Fayetteville
Mary Sutton Rawls (August, 1970)	Raleigh
Sally Elizabeth Snow (August, 1970)	Charleston, S. C.
Lura Self Tally (August, 1970)	Fayetteville
Ruth Barefoot Thompson (July, 1970)	Raleigh
Ann Howell Wade (December, 1970)	Fuquay-Varina
Jeslyn Austell Wheelless (August, 1970)	Concord
Airlee Barbour Wilkerson (August, 1970)	Raleigh

Industrial Arts Education

Nathaniel Creighton Alexander (December, 1970)	Clinton
Jonas David Edwards (August, 1970)	Pinetops
Milton Leigh Kirkland (August, 1970)	Durham

Mathematics Education

Margaret Stopher Shoenfelt (July, 1970)	Raleigh
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Science Education

Frank John Kuchan (August, 1970) Dillonvale, Ohio

Vocational Industrial Education

Hunter Wilson Blake (August, 1970) Greenfield, Mass.
 Donald Franklin Burgin (December, 1970) Durham
 Wallace Wilson Burke (December, 1970) Raleigh
 Earl William Cameron (August, 1970) Richmond, Va.
 Lawrence Odell Faircloth (August, 1970) Raleigh
 Larry Warren Fuqua (December, 1970) Burlington
 James Odell Howard (August, 1970) Roanoke Rapids
 Marvin Ray Joyner (August, 1970) Wilson
 Logan Harold McLaughlin (August, 1970) Hendersonville
 Kenneth Wager Marrone (December, 1970) Raleigh
 Walter Herman Timm, Jr. (December, 1970) South Amboy, N. J.
 Thomas Edward Williams (August, 1970) Parkton

MASTER OF ELECTRICAL ENGINEERING

Aldean Bengé (August, 1970) Traphill
 Charles Norman Carter (December, 1970) Brevard
 Pithuk Charoensawadsiri (December, 1970) Bangkok, Thailand
 Donald Bryan Drye (December, 1970) Southern Pines
 Robert Hugh Evans, Jr. (July, 1970) Greenville
 William Henry Leavell (December, 1970) Durham
 Wazir Mohammad Sultany (December, 1970) Totakhale, Afghanistan
 Krishnamoorthy Virupaksha (December, 1970) Secunderabad, India

MASTER OF ENTOMOLOGY

Thomas Leonard Schwarz (July, 1970) Montclair, N. J.

MASTER OF FORESTRY

Robert E. Hartung (August, 1970) Milwaukie, Ore.

MASTER OF INDUSTRIAL ENGINEERING

Dinesh Chandra Agrawal (December, 1970) Jaipur, India
 Salah El-Den Sayed Azzazy (December, 1970) Egypt
 Kiran Chandra Kochhar (December, 1970) Raleigh
 Isaac Z. Lasar (August, 1970) Raleigh
 Nathan Joseph Wolf (December, 1970) Newark, N. J.

MASTER OF MECHANICAL ENGINEERING

Satish Murarilal Calcuttawala (December, 1970) Gujarat, India
 Charles Gerald Letchworth (December, 1970) Rocky Mount
 Bharat Gajendra Majmudar (August, 1970) Baroda, India
 William Henry Nau (December, 1970) Hickory
 Suresh Udipi Kadbet Nayak (December, 1970) Salem, India
 Robert Patrick O'Brien (December, 1970) Phoenix, Ariz.
 Howard Hammel Reed (December, 1970) Absecon, N. J.

Udayan Bhalchandra Shah (July, 1970) Ahmedabad, India
 Wilbur Glenn Steele, Jr. (July, 1970) Vicksburg, Miss.
 Thomas Charles Wenrich (July, 1970) Disputanta, Va.
 Ivan Eugene Wilkinson (July, 1970) Charlotte

MASTER OF PLANT PATHOLOGY

Akbar Khan (August, 1970) Karachi, West Pakistan

MASTER OF PUBLIC AFFAIRS

Bruce Edward Matthews (December, 1970) Raleigh
 Paul William Oshel (August, 1970) Huntington, W. Va.

MASTER OF SOCIOLOGY

Charlie Sinthunava (December, 1970) Bangkok, Thailand

MASTER OF STATISTICS

Nathaniel Bertram Guttman (December, 1970) Asheville
 David Harper (August, 1970) Rochester, N. Y.
 Shiu Tao Lii (December, 1970) Taiwan, China
 Lee Anderson Lillard, III (December, 1970) Arlington, Texas
 William Lee Peters (December, 1970) Clarksburg, W. Va.
 Christa Agnes Zschege (August, 1970) Berlin, Germany

MASTER OF TEXTILE TECHNOLOGY

Ernest George Fleischmann (December, 1970) New York, N. Y.
 Clifton Clark Jones (August, 1970) Chester, Va.
 Roger Kenneth Mowen, Jr. (December, 1970) Nutley, N. J.
 Council Wooten Oliver, III (December, 1970) Wilson
 James Wilson Owens (August, 1970) Elizabeth City

MASTER OF ARTS

Economics

John Paul Combs (December, 1970) Boone

English

Archie Brown Allen, III (December, 1970) Franklinton
 Elizabeth Webb Brewer (July, 1970) Statesville
 Sally Beaver Buckner (August, 1970) Raleigh
 June Fouraker Clark (December, 1970) Raleigh
 Jennie Turner Hall (August, 1970) Raleigh
 Ronnie Bradford Jenkins (August, 1970) Rockingham

History

Martha Ann Wright (December, 1970) Raleigh

MASTER OF SCIENCE

Agricultural Economics

Robert Wooten May (December, 1970) Farmville

Steven Darrell Mundy (December, 1970)Conover
Gerald Knight O'Mara (August, 1970)Marriottsville, Md.

Animal Science

John Charles D'Orio, Jr. (December, 1970)Placerville, Calif.
Jackie Joe Rutledge (August, 1970)Woodward, Okla.

Biological and Agricultural Engineering

John David Ariail (December, 1970)Sparta, Ga.
Subhendu Mauli Chakrabarti (December, 1970)Kharagpur, W. Bengal
Crowell Gattis Bowers, Jr. (August, 1970)Norwood

Botany

Robert Ammon Braddy (August, 1970)Burlington
Susan Hewlett Hall (August, 1970)Durham
JoAnne Johnson Reid (December, 1970)Clarkstown, Ga.
Edward Wayne Smith (December, 1970)Hobart, Ind.

Chemical Engineering

Vachaspati Vishnukumar Joshi (July, 1970)Ahmedabad, India

Chemistry

Robert James Beam (August, 1970)Angleton, Texas
Christopher Page Crecente (July, 1970)Moultrie, Ga.
Joseph Pietro D'Antonio (July, 1970)Devon, Penna.
Charlotte Dian Humphrey (December, 1970)Birmingham, Ala.
Rodger Nolan Jenkins (December, 1970)Raleigh
Hong Ki Kim (July, 1970)Seoul, Korea
Shui-Wai Lin (December, 1970)Hong Kong
William Edward Shasky (December, 1970)New York, N. Y.

Civil Engineering

Horace Randolph Thomas, Jr. (August, 1970)Holland, Va.
Jose Luis Vega (December, 1970)Madrid, Spain

Crop Science

Edgar Lowndes Ready, III (August, 1970)Johnston, S. C.
William Larry Rogers (August, 1970)Mebane
Randall Laurence Scholl (August, 1970)Arrowsmith, Ill.

Economics

John Dudley Dodson (August, 1970)Raleigh

Electrical Engineering

Raymond Earle Barber (August, 1970)Greensboro
Stuart Boyce Holoman (August, 1970)Raleigh
Bobby James Watkins (December, 1970)Raleigh

Entomology

Richard Norman LaSalle (December, 1970)Massapequa, N. Y.
Barbara Jean Stephen (August, 1970)Tenafly, N. J.
Thomas Gordon Wilson (July, 1970)Sumter, S. C.

Food Science

John Robert Woodard, Jr. (August, 1970) Spring Hope

Forestry

Wesley Thomas Adams (December, 1970) Arcata, Calif.

Edward Hunter Mallonee, Jr. (December, 1970) Raleigh

Richard Lee Porterfield (December, 1970) Columbus, Ohio

Genetics

Mary Elizabeth Sawyer (August, 1970) Eden

Geology

Earl Healen Bennett, II (December, 1970) Fort Atkinson, Wis.

Perry Albert Carpenter, III (July, 1970) Salisbury

Industrial Engineering

Vishwas Yeshwant Bawle (August, 1970) Bombay, India

Bikash Bhadury (December, 1970) Calcutta, India

Philip Edward Taylor (August, 1970) Akron, Ohio

Materials Engineering

Johnny Lee Elliott (December, 1970) Statesville

Dong Kwang Kim (August, 1970) Seoul, Korea

Robert Andrew Lawhon (August, 1970) Carthage

James Duane Vickrey (December, 1970) Elizabeth City

Mathematics Education

Jane Allen Gaston (July, 1970) Seattle, Wash.

Carolyn Jean Jones (July, 1970) Raleigh

Mechanical Engineering

Robert Allison Greene (December, 1970) Goldsboro

David Douglas Jones, Jr. (December, 1970) Salisbury

Lawrence Werner Redman (December, 1970) Chevy Chase, Md.

Paul Henry Scherf, Jr. (December, 1970) Lancaster, Ohio

Kiran Chhabildas Shah (December, 1970) Raleigh

Mahesh Kantilal Shah (December, 1970) Ahmedabad, India

Narendrabhai Manilal Shah (December, 1970) Gujarat, India

Mathai Soman Thomas (August, 1970) New Delhi, India

Manoj D. Yajnik (December, 1970) Gujarat, India

Microbiology

Lloyd Douglas Lauer (December, 1970) Dayton, Ohio

Maurice James Perdue (December, 1970) Raleigh

Gail Elizabeth Shelley (December, 1970) Raleigh

Nuclear Engineering

Edward Aloysius Brown, III (December, 1970) Newburgh, N. Y.

Charles Hayden Fox, Jr. (August, 1970) Oak Ridge, Tenn.

Richard Alan Laskiewicz (August, 1970) Toledo, Ohio

Frank Harold McDougall (July, 1970) Raleigh

Andres Sy Ong (July, 1970) Manila, Philippines

Richard Hall Williamson (December, 1970) Raleigh

Operations Research

Donald Albert Heimburger (December, 1970) Strongsville, Ohio

Physics

Janice McLean Bireline (December, 1970) Raleigh

Shu-Hsia Chen (December, 1970) Taiwan, China

James Millington Howard, II (December, 1970) Oxford

Douglas Alvin Outlaw (December, 1970) Kinston

Plant Pathology

Raquel Noguera Gonzalez (December, 1970) Venezuela, S. A.

Carlos V. Nava (July, 1970) Venezuela, S. A.

Plant Physiology

Carolyn Sue Pruett (December, 1970) Bluefield, W. Va.

Psychology

Raymond Thomas Bartus (December, 1970) Belle Vernon, Penna.

Howard Louis Bregman (December, 1970) Fairfax, Va.

Craig Blaine Grether (August, 1970) Raleigh

George Lawrence Grim (August, 1970) Kutztown, Penna.

Judith Pleasants Jamieson (August, 1970) Charles City County, Va.

Bernard H. Levin (December, 1970) Raleigh

Lynn Edward Ondrizek (December, 1970) Zelenople, Penna.

Lorraine Meichenbaum Turk (December, 1970) New York, N. Y.

Rural Sociology

Terry J. Kane (December, 1970) Philadelphia, Penna.

Oedies Veronica Williams (July, 1970) Baton Rouge, La.

George Michael Wise (August, 1970) Raleigh

Science Education

Raymond Edward Kelling (December, 1970) Parma, Ohio

Soil Science

Freeman Sidney Long, Jr. (July, 1970) Hertford

Michael Anthony Granger (December, 1970) Georgetown, Guyana

Textile Technology

Shirishkumar Harilal Shelat (December, 1970) Dar-es-salaam, Tanzania

Wood and Paper Science

Frederick John Wheeler (December, 1970) Chicago, Ill.

Joseph B. Zicherman (August, 1970) Shaker Heights, Ohio

Zoology

Mary Elwanda Bennett (December, 1970) Austell, Ga.

Adrian Hayes Farmer, Jr. (July, 1970) Columbia, S. C.

Alan Lindsey Kyles (August, 1970) Troutman

Janet Warner Reid (December, 1970) Raleigh

Doctor of Education Degrees

- Donald Frederick Corlett, Adult and Community College Education, August, 1970
Raleigh North Carolina
- Dissertation: The Development of a Model for Instructor Tenure in the Community College. (Under the direction of Dewey Allen Adams).
- James Marshall Crews, Adult and Community College Education, August, 1970
Wilmington, North Carolina
- Dissertation: Selected Physiological Responses under Varying Environmental Conditions. (Under the direction of John Edgar Boone and Robert John Dolan).
- Clarence Edward Dodgens, Adult and Community College Education, August, 1970
Burgaw, North Carolina
- Dissertation: A Comparison of College Resident and Commuter Students on Certain Psycho-Sociological Characteristics. (Under the direction of Dewey Allen Adams and Robert John Dolan).
- William Ronald McCarter, Adult and Community College Education, August 1970
Burlington, North Carolina
- Dissertation: An Analysis of the Use of Title III, Elementary and Secondary Education Act of 1965, by North Carolina Counties According to Selected Socio-Economic and Political Variables. (Under the direction of Charles J. Law and Edgar J. Boone).
- Rodolphus Alvin Mabry, Adult and Community College Education, December, 1970
Hickman, Kentucky
- Dissertation: An Analysis of the Practice and Violation of Principles of Supervision Evidenced in Satisfying and Dissatisfying Work Experiences. (Under the direction of Emily H. Quinn).
- Allen Burnell Moore, Adult and Community College Education, December, 1970
Lexington, Kentucky
- Dissertation: Noncognitive Attributes of Participants and Nonparticipants in Selected Adult Basic Education Programs. (Under the direction of John Kincaid Coster and Robert John Dolan).
- Gerald Ray Olson, Adult and Community College Education, December, 1970
Logan, Utah
- Dissertation: The Role of the Subprofessional in the Cooperative Extension Service. (Under the direction of Edgar John Boone).
- Dove Henry Pate, Jr., Industrial Arts Education, August, 1970
Charleston, South Carolina
- Dissertation: The Recreational Function for Industrial Arts Education: Origins, Principles, and Guidelines. (Under the direction of Delmar Walter Olson).

- James Andrew Reynolds, Adult and Community College Education, December, 1970
Blacksburg, Virginia
- Dissertation: Induction Training Experiences for Cooperative Extension Agents. (Under the direction of Emily H. Quinn).
- Mendel Leno Robinson, Jr. Industrial and Technical Education, December, 1970
Raleigh, North Carolina
- Dissertation: An Analysis of the Unique Need for and Problems Impinging upon the Offering of a Complete Program of Occupational Education in Textiles in the State of North Carolina. (Under the direction of Durwin Melford Hanson).
- Estelle Edwards White, Adult and Community College Education, December, 1970
Weldon, North Carolina
- Dissertation: Professionalization Process in Adult Education, U.S.A. 1958-1969. (Under the direction of Edgar John Boone).

Doctor of Philosophy Degrees

- Charles Owen Abernathy, Physiology, December, 1970
Bowling Green, Florida
- Dissertation: The Induction of the Microsomal Mixed Function Oxidase System in Mice by DDT and DDT Analogs. (Under the direction of Frank Edwin Guthrie and Ernest Hodgson).
- Keith Angevin Argow, Forestry, December, 1970
Marion, Virginia
- Dissertation: Social Action for Land. Preservation. (Under the direction of Joe Oscar Lammi and John Warren Duffield).
- Vijaysinh Govindji Ashar, Statistics, July, 1970
Bombay, India
- Dissertation: On the Use of Preliminary Tests in Regression Analysis. (Under the direction of Thomas Dudley Wallace).
- Billy Stuart Batts, Zoology, December, 1970
Raleigh, North Carolina
- Dissertation: Life History Aspects of the Skipjack Tuna (*Katsuwonus pelamis*) in the Northwestern Atlantic Ocean. (Under the direction of William Walton Hassler).
- Harry Lee Beach, Jr., Mechanical Engineering, December, 1970
Wilson, North Carolina
- Dissertation: The Application of the Normal-Mode Expansion Technique to Problems of Radiative Heat Transfer. (Under the direction of M. N. Ozisik).
- Paul Fredric Becher, Materials Engineering, August, 1970
Raleigh, North Carolina
- Dissertation: Crystalline Deformation and Grain Boundary Behavior in Aluminum Oxide. (Under the direction of Hayne Palmour, III).

- Anthony Rex Bellve, Animal Science, December, 1970
Hamilton, New Zealand
- Dissertation: A Contrast of Normal and Abnormal Embryonic Development in the Mouse. (Under the direction of Eugene J. Eisen).
- Jose Manuel Berruecos, Animal Science, July, 1970
Mexico City, Mexico
- Dissertation: Evaluation of Feed Efficiency and Its Genetic Association with Gain and Carcass Quality in Swine. (Under the direction of Odis Wayne Robison).
- Helen Anne Bertrand, Biochemistry, December, 1970
Newark, Delaware
- Dissertation: Investigation of Stimulation of Microsomal Glyceride Synthesis by Particle-Free Supernatant Preparations from Mouse Epididymal Adipose Tissue. (Under the direction of Samuel B. Tove).
- Vasanth Kumar Bhat, Materials Engineering, December, 1970
Pittsburgh, Pennsylvania
- Dissertation: Sodium-Iron-Silica Glasses and Steel Systems - Wetting, Adherence, and Mössbauer Effect Spectroscopic Studies. (Under the direction of Charles Richard Manning, Jr.).
- Margaret Anne Bird, Genetics, December, 1970
Parkersburg, West Virginia
- Dissertation: A Study of the Genetic Basis of the Sexual Dimorphism for Wing Length in *Drosophila melanogaster*. (Under the direction of Henry Elkin Schaffer).
- William James Blackmon, Crop Science, December, 1970
Whiteville, North Carolina
- Dissertation: The Effects of 3',4'-Dichloro-2-methyl-valerianilide and Related Acylanilides on Reactions Mediated by Mung Bean Mitochondria. (Under the direction of Donald Edwin Moreland).
- Aaron Earl Blair, Genetics, December, 1970
Lovewell, Kansas
- Dissertation: Karyotypic analysis of plants displaying disjunct distributions. (Under the direction of Benjamin W. Smith).
- David Wilder Bridges, Zoology, December, 1970
Springfield, Illinois
- Dissertation: The Critical Thermal Maximum of Juvenile Spot, *Leiostomus xanthurus*, Lacepede. (Under the direction of John E. Hobbie).
- Jack Roger Bridges, Electrical Engineering, July, 1970
Raleigh, North Carolina
- Dissertation: Charge Injection in Metal-Insulator-Semiconductor Devices. (Under the direction of John Reid Hauser).
- Royall Melvin Broughton, Jr., Wood and Paper Science, December, 1970
Rolesville, North Carolina
- Dissertation: The Chemistry and Morphology of the N-Methylol Acrylamide Crosslink in Cotton Fabric. (Under the direction of Henry A. Rutherford and Alfred J. Stamm).

- Philip Dean Buchanan, Genetics, December, 1970
Sylva, North Carolina
- Dissertation: Genetic Responses of *Habrobracon* to Radiation in Combination with Clinostat Rotation, Vibration, and Centrifugation. (Under the direction of Daniel Swartwood Grosch).
- Yik Kuan Chan, Soil Science, December, 1970
Kuala Lumpur, Malaysia
- Dissertation: The Transfer of Nitrogen from Legume to Grass in Legume-Grass Associations. (Under the direction of William Victor Bartholomew).
- Arun Chatterjee, Civil Engineering, August, 1970
Calcutta, India
- Dissertation: An Investigation of the Feasibility of Synthesizing Mathematical Models for Forecasting Travel on a Regional Highway Network. (Under the direction of Paul Day Cribbins).
- Ching Feng Chen, Civil Engineering, December, 1970
Taiwan, China
- Dissertation: Negative Pore Pressures and Shear Strength of Saturated Soils. (Under the direction of Leonard Jay Langfelder).
- Hsiao-Ling Chu, Civil Engineering, July, 1970
Taiwan, China
- Dissertation: Numerical Techniques for Nonlinear Wave Refraction and for Propagation of Long Waves in a Two-dimensional Shallow Water Basin. (Under the direction of Michael Amein).
- Lewis Bennion Coons, Entomology, August, 1970
Salt Lake City, Utah
- Dissertation: Fine Structure of Selected Organ Systems of the Mite *Macrocheles muscaedomesticae* (Acarina: Mesostigmata: Macrochelidae). (Under the direction of Richard Charles Axtell).
- Douglas Adrian Cotter, Electrical Engineering, August, 1970
Raleigh North Carolina
- Dissertation: On Designing Minimal Cost Synchronous Sequential Circuits. (Under the direction of John Staudhammer).
- James Uriah Crowder, Jr., Engineering Mechanics, December, 1970
Asheville, North Carolina
- Dissertation: An Experimental Study of the Distortion and Redevelopment of a Turbulent Shear Flow. (Under the direction of John Auert Edwards).
- Stylios Daniel Danielopoulos, Physics, August, 1970
Raleigh North Carolina
- Dissertation: The Knock-Out Mechanism in the S-Matrix Theory of Direct Nuclear Reactions. (Under the direction of Jae Young Park).
- William Donald Davies, Zoology, December, 1970
Cincinnati, Ohio
- Dissertation: The Effects of Temperature, pH and Total Dissolved Solids on the Survival of Immature Striped Bass, *Morone saxatilis* (Walbaum). (Under the direction of Francis Eugene Hester).

- Robert Banks Davis, Entomology, July, 1970
Jonesboro, Tennessee
- Dissertation: Contribution to a Classification of the Higher Categories (Family, Subfamily and Tribe) of the Auchenorrhynchous Homoptera (Cicadellidae and Aetalionidae). (Under the direction of David Allan Young).
- Albert Dionne, Statistics, December, 1970
Quebec, Canada
- Dissertation: On Small Sample Properties of Distribution and Density Function Estimators. (Under the direction of Charles Price Quesenberry).
- Kenneth Roland Dunlap, Jr., Microbiology, August, 1970
Portsmouth, New Hampshire
- Dissertation: The Effect of Hydrocarbon Growth Substrates on the Lipids of Hydrocarbon-Utilizing Microorganisms. (Under the direction of Jerome J. Perry).
- Stanley Eugene Dunn, Jr., Mechanical Engineering, December, 1970
Tallahassee, Florida
- Dissertation: A Mathematical Model for the Pneumatic Tire. (Under the direction of Carl F. Zorowski).
- Barry Ward Elledge, Economics, December, 1970
Boone, North Carolina
- Dissertation: Effects of Government Feed Grain Programs on Beef and Pork Prices and Costs to Consumers. (Under the direction of Dale Max Hoover).
- Don Erwin Ethridge, Economics, December, 1970
Muleshoe, Texas
- Dissertation: An Economic Study of the Effect of Municipal Sewer Surcharges on Industrial Wastes. (Under the direction of James Arthur Seagraves).
- Margaret Davis Folsom, Physiology, August, 1970
Plano, Iowa
- Dissertation: Biochemical Characteristics of Microsomal Preparations from the Housefly *musca domestica*, L. (Under the direction of Ernest Hodgson).
- Benjamin Tyson Gravely, Physics, August, 1970
Charlotte, North Carolina
- Dissertation: Nuclear Magnetic Resonance Lineshapes in LiF and NaF Single Crystals. (Under the direction of Jasper Durham Memory).
- Richard Dale Gruenhagen, Crop Science and Botany, December, 1970
Walcott, Iowa
- Dissertation: Effects of Herbicides on RNA and Protein Syntheses in Excised Plant Tissues. (Under the direction of Donald Edwin Moreland).

- Ghodratollah N. Haddad, Engineering Mechanics, August, 1970
Tehran, Iran
- Dissertation: On Dispersion and Characteristic Motions of Temperature-Rate Dependent Materials. (Under the direction of Tien Sun Chang).
- Marvin Jonathan Haire, Nuclear Engineering, December, 1970
Jacksonville, North Carolina
- Dissertation: The Sorption Behavior of Cesium-Rubidium Mixtures in Graphites at High Temperatures. (Under the direction of Lloyd R. Zumwalt).
- James Clinton Halsey, Applied Mathematics, August, 1970
Sparta, North Carolina
- Dissertation: Finite Automata Admitting Inverses with Some Application to Cryptography. (Under the direction of Jack Levine).
- Larry Keith Hammett, Botany, August, 1970
Scott Depot, West Virginia
- Dissertation: Influence of Ammonium Nitrogen and Nitrate Nitrogen on Certain Biochemical Constituents of Fruit of *Vaccinium corymbosum* L. (Under the direction of Walter Elmer Ballinger).
- Larry George Hansen, Entomology, December, 1970
Omaha, Nebraska
- Dissertation: Microsomal Oxidations of Xenobiotics in the House Fly, *Musca domestica* (L). (Under the direction of Ernest Hodgson and Richard C. Axtell).
- George Lynn Hargrove, Animal Science, December, 1970
Raleigh, North Carolina
- Dissertation: Biases in Dairy Sire Evaluation Attributable to Genetic Trend and Female Selection. (Under the direction of James Edward Legates).
- James Burton Hart, Jr., Soil Science, August, 1970
Gouverneur, New York
- Dissertation: Solutes in Pressure Membrane Filtrates of Several Clay-Water-Electrolyte Systems. (Under the direction of J. Fulton Lutz).
- James Roger Haviland, Plant Physiology, August, 1970
Chatfield, Ohio
- Dissertation: A Study of the Production of Isozymes by Pure and Mixed Plant Callus Cultures. (Under the direction of Glenn Ray Noggle).
- Lawrence Wendell Haymon, Food Science, December, 1970
Port Allen, Louisiana
- Dissertation: Characterization of some Flavor Principles of Tabasco Peppers. (Under the direction of Leonard William Aurand).
- Albert Charles Hoffman, Genetics, August, 1970
Sunbury, Pennsylvania
- Dissertation: A Characterization of Recovery Mechanisms and Modifying Influences Operating Subsequent to Genetic Damage Induced by Ethyl Methanesulfonate and Gamma Radiation in *Bracon hebetor*. (Under the direction of Daniel Swartwood Grosch).

- Burt S. Holland, Statistics, August, 1970
Flushing, New York
- Dissertation: On the Estimation of Regression Coefficients with a Coordinate-wise Mean Square Error Criterion of Goodness. (Under the direction of Thomas Dudley Wallace).
- Chris Ching-Yang Hsu, Psychology, December, 1970
Taiwan, China
- Dissertation: The Validation of Hypotheses Derived from a Model of Vocational Decision-Making. (Under the direction of Bert Whitley Westbrook).
- Frederick Robert Jetter, Civil Engineering, December, 1970
Raleigh, North Carolina
- Dissertation: Closed Form Deformation Analysis of Latticed Hyperbolic Paraboloids. (Under the direction of Donald Lee Dean and Mehmet Ensar Uyanik).
- David Ray Johnson, Materials Engineering, December, 1970
Fayetteville, North Carolina
- Dissertation: Densification Kinetics of Spinel Sintered Under Rate Control. (Under the direction of Hayne Palmour, III).
- Roger Thomas Johnson, Chemical Engineering, August, 1970
Milwaukee, Wisconsin
- Dissertation: Factors Affecting Contact Nucleation and Growth Rates for Crystals in Supersaturated Aqueous Solution. (Under the direction of Warren Lee McCabe).
- Roy Lee Johnston, Chemistry, August, 1970
Mount Holly, North Carolina
- Dissertation: The Transmission of Electronic Effects in *E*-2-(*m* and *p*-Substituted Phenyl)-cyclopropyl Methyl Ketones and Their 2,4-Dinitrophenylhydrazones. (Under the direction of Louis Allman Jones).
- Robert Clay Kellison, Forestry, December, 1970
Raleigh, North Carolina
- Dissertation: Phenotypic and Genotypic Variation of Yellow-Poplar (*Liriodendron tulipifera* L.). (Under the direction of John W. Duffield).
- Chong Hee Kim, Materials Engineering, December, 1970
Seoul, Korea
- Dissertation: Microstructural Alterations in Alumina Ceramics Associated with Ballistic Impact Events. (Under the direction of Hayne Palmour, III).
- Il Chul Kim, Sociology, December, 1970
Seoul, Korea
- Dissertation: A Study of the Relationship between Anomia and Occupational Mobility. (Under the direction of Glenn Crocker McCann).
- Constantinos Nicholas Koliopoulos, Plant Pathology, December, 1970
Athens, Greece
- Dissertation: Variation and Genetic Studies in the Soybean Cyst Nematode *Heterodera glycines*. (Under the direction of Anastasios C. Triantaphyllou).

- Clark Whitney Lantz, Forestry, August, 1970
Stillwater, Oklahoma
- Dissertation: Graft Incompatibility in Loblolly Pine. (Under the direction of Bruce John Zobel).
- Neil Arden Lapp, Plant Pathology, December, 1970
Hopedale, Illinois
- Dissertation: Cytological and Radiation Studies in the Nematode Family Heteroderidae. (Under the direction of Anastasios C. Triantaphyllou).
- Ray Roberts Lassiter, Zoology, July, 1970
Ahoskie, North Carolina
- Dissertation: A Finite Difference Model for Simulation of Dynamic Processes of Ecosystems. (Under the direction of Don W. Hayne).
- Daniel Dixon Lee, Jr., Animal Science, December, 1970
Dillon, South Carolina
- Dissertation: Influences of Monovalent Cations on Lactic Acid Metabolism of Sheep Fed Purified Diets. Interconversion of Lactic Acid Isomers in Sulfur-Adequate Diets. (Under the direction of Gennard Matrone).
- Hung Chao Lee, Microbiology, December, 1970
Taiwan, China
- Dissertation: Relationships between Catabolic Reactions and Fatty Acid Synthesis in *Lactobacillus plantarum*. (Under the direction of John Joseph McNeill).
- Archie Max Lennon, Animal Science, August, 1970
Evergreen, North Carolina
- Dissertation: Soy Flour as a Protein Source for Early-Weaned Pigs. (Under the direction of Elliott Roy Barrick).
- Stephen Yaw-Rui Lin, Wood and Paper Science, December, 1970
Taiwan, China
- Dissertation: Photochemical Reactions of Lignin. (Under the direction of Knut Paul Kringstad).
- Chester DeWitt Loggins, Jr., Electrical Engineering, July, 1970
Winston-Salem, North Carolina
- Dissertation: The Effect of Electron Irradiation Damage on the Resistivity and Piezoresistivity of n-Type Silicon. (Under the direction of Michael Anthony Littlejohn, and John Reid Hauser).
- Max Ira Loyd, Economics, August, 1970
Statesville, North Carolina
- Dissertation: Availability and Consumption of Dairy Products in Eastern North Carolina. (Under the direction of Richard Adams King).
- Robert Lee McElwee, Forestry, December, 1970
Raleigh, North Carolina
- Dissertation: Radioactive Tracer Techniques for Pine Pollen Flight Studies and an Analysis of Short-Range Pollen Behavior. (Under the direction of John Warren Duffield).

- William Frederick Marcuson, III, Civil Engineering, December, 1970
Winston-Salem, North Carolina
- Dissertation: The Effects of Time on the Dynamic Shear Modulus and Damping Ratio of Clay Soils. (Under the direction of Harvey Edward Wahls).
- Gerald Arnold Marin, Applied Mathematics, December, 1970
High Point, North Carolina
- Dissertation: The Multitype Branching Process with Random Environment. (Under the direction of John William Bishir).
- Pedro Luis Melendez, Plant Pathology, July, 1970
Bayamon, Puerto Rico
- Dissertation: The *Pythium* Root-Knot Complex in Flue-Cured Tobacco. (Under the direction of Nathaniel Thomas Powell).
- Ignacio Mendez-Ramirez, Statistics, August, 1970
Mexico City, Mexico
- Dissertation: Study of Uniformity Field Trials and Six Proposals as Alternatives to Blocking for the Design and Analysis of Field Experiments. (Under the direction of Jerry Adolph Warren).
- Thomas Kreske Mills, Electrical Engineering, July, 1970
Arlington, Virginia
- Dissertation: A Different Approach to Quantizing Noise Analysis in Delta Modulators. (Under the direction of John Benjamin O'Neal, Jr.).
- Melvin Lee Moeschberger, Statistics, December, 1970
Berne, Indiana
- Dissertation: A Parametric Approach to Life-Testing and the Theory of Competing Risks. (Under the direction of Herbert A. David).
- Waldemar Moura Filho, Soil Science, December, 1970
Vicoso, Minas Gerais, Brazil
- Dissertation: Studies of a Latosol Roxo (Eustrustox) in Brazil: Clay Mineralogy, Micromorphology Effect on Ion Release, and Phosphate Reactions. (Under the direction of Stanley Walter Buol).
- Charles Lee Mulchi, Soil Science, August, 1970
Norlina, North Carolina
- Dissertation: Photosynthetic and Photorespiratory Gas Exchange Kinetics in Illuminated Soybean Leaves Employing Mass Spectrometric Techniques. (Under the direction of Richard J. Volk and William A. Jackson).
- Jon Lion Nevins, Economics, December, 1970
Florence, Alabama
- Dissertation: A Model for Calculating the Optimum Analysis of Mixed Fertilizers. (Under the direction of James Arthur Seagraves).
- Chittaranjan Narandas Nirmel, Mechanical Engineering, December, 1970
Indianapolis, Indiana
- Dissertation: An Analytical and Experimental Investigation of Viscous Incompressible Flow through Narrow Regions With and Without Rotating Boundaries. (Under the direction of Frederick Otto Smetana).

- Raphael Asuerinmen Odihirin, Plant Pathology, August, 1970
Oke-Ora, Nigeria
- Dissertation: Effects of Root-knot and Lesion Nematode Infection on Transpiration and Water Utilization by Tobacco Plants. (Under the direction of Joseph Neal Sasser).
- Andres Sy Ong, Nuclear Engineering, December, 1970
Manila, Philippines
- Dissertation: The Diffusion of Xenon-133 in Cesium Iodide and Calcium Fluoride Single Crystals. (Under the direction of Thomas Smith Elleman).
- Stephen Kent Park, Applied Mathematics, August, 1970
Newport News, Virginia
- Dissertation: On the Equivalence of Optimal Control Problems and the Transformation of Optimal Control Problems with Compact Control Regions into Lagrange Problems. (Under the direction of Hans Sagan).
- James Leslie Pearson, Economics, December, 1970
Gainesville, Florida
- Dissertation: A Growth Model for Evaluating Investment Alternatives of a Processor of Seasonally Produced Products - An Application to Vegetable Canning. (Under the direction of Richard Adams King and Gene Arthur Mathia).
- Richard Busbee Phillips, Chemical Engineering, December, 1970
Raleigh, North Carolina
- Dissertation: Studies of Lignin-Cellulose-Styrene Graft Copolymerization Reactions. (Under the direction of Vivian Thomas Stannett).
- Robert George Pindell, Engineering Mechanics, July, 1970
Charlotte, North Carolina
- Dissertation: An Experimental Study of the Coaxial Turbulent Jet. (Under the direction of John Auert Edwards).
- Jan Willem Luning Prak, Physics, December, 1970
The Hague, Netherlands
- Dissertation: Expansion of a One-dimensional Plasma in a Magnetic Field. (Under the direction of Alvin Wilkins Jenkins, Jr.).
- Lester Ware Preston, Jr., Statistics, August, 1970
Richmond, Virginia
- Dissertation: Some Simultaneous Inference Median Tests. (Under the direction of Robert G. D. Steel).
- Frederick James Prochaska, Economics, December, 1970
Robstown, Texas
- Dissertation: Opportunity Cost of Time and Other Socio-economic Effects on Away-from-Home Food Consumption. (Under the direction of Ronald A. Schrimper and Richard A. King).
- Willis Alton Reid, Jr., Zoology, July, 1970
Raleigh North Carolina
- Dissertation: The Histochemistry of *Procyotvema marsupiformis* Harkema and Miller, 1959 (Trematoda: Diplostomatidae). (Under the direction of Reinard Harkema).

- Donald William Reinfurt, Statistics, August, 1970
Chapel Hill, North Carolina
- Dissertation: The Analysis of Categorical Data with Supplemented Margins Including Applications to Mixed Models. (Under the direction of Gary Grove Koch).
- Jackie Wayne Darmon Robbins, Biological and Agricultural Engineering, August, 1970
Chesnee, South Carolina
- Dissertation: Water Pollution by Swine Production Operations. (Under the direction of George James Kriz).
- Darrell Lynn Roberts, Biological and Agricultural Engineering, August, 1970
Seffner, Florida
- Dissertation: Operator Performance as a Function of Angular Disturbance in the Pitch and Roll Modes. (Under the direction of Charles Wilson Suggs).
- Marcelino Quijada-Rosas, Forestry, December, 1970
El Tigre, Anzoategui, Venezuela
- Dissertation: Drought Resistance in Eight and Sixteen-Week-Old Loblolly Pine Seedlings. (Under the direction of Bruce John Zobel).
- Abul Bashar Mohammad Salehuddin, Wood and Paper Science, August, 1970
Dacca, Pakistan
- Dissertation: A Unifying Physico-Chemical Theory for Cellulose and Wood and Its Application in Gluing. (Under the direction of Aldos Cortez Barefoot and Eric Louis Ellwood).
- Thomas Wilbur Schnatz, Nuclear Engineering, December, 1970
Lindenhurst, Long Island, New York
- Dissertation: On Vector Equations of Transfer with Plane and Spherical Symmetry. (Under the direction of Charles Edward Siewert).
- Robert Kincaid Seals, Jr., Mechanical Engineering, December, 1970
Charlotte, North Carolina
- Dissertation: Nonequilibrium Plasma Boundary Layer Over a Cathode. (Under the direction of Hassan Ahmad Hassan).
- Arthur Thompson Shankle, Electrical Engineering, August, 1970
Baton Rouge, Louisiana
- Dissertation: Solution of the Inhomogeneously Filled Waveguide Using Dyadic Green's Function. (Under the direction of William John Barclay).
- Rowland McLamb Shelley, Physiology, December, 1970
Raleigh, North Carolina
- Dissertation: Biosynthesis of phosphatidylcholine and related compounds in the fat body of *Phormia regina* larvae. (Under the direction of Ernest Hodgson).
- Yan-Feng Shen, Biochemistry, December, 1970
Taiwan, China
- Dissertation: Purification and Characterization of Acetylornithine 6-Transaminase from *Escherichia coli* Strain W. (Under the direction of Evan Earl Jones).

- Albert William Sherdon, Statistics, August, 1970
Lansdale, Pennsylvania
- Dissertation: Sampling Directed Graphs. (Under the direction of Charles Harry Proctor).
- Joseph Evan Shoenfelt, Electrical Engineering, July, 1970
Oswego, New York
- Dissertation: Techniques for Efficient Feature Representation in Pattern Recognition. (Under the direction of Alfred John Goetze Charles Carson Tappert and John Benjamin O'Neal, Jr.).
- Lowell Victor Sick, Zoology, December, 1970
New Hartford, New York
- Dissertation: The Nutritional Effect of Five Species of Marine Algae on the Growth, Development, and Survival of the Brine Shrimp, *Artemia salina*. (Under the direction of John Eyres Hobbie and Theodore Roosevelt Rice).
- Robert John Simoneau, Mechanical Engineering, December, 1970
Rocky River, Ohio
- Dissertation: Velocity and Temperature Profiles in Near-Critical Nitrogen Flowing Over a Heated Flat Plate. (Under the direction of James C. Williams, III).
- Earl Ray Sluder, Forestry, July, 1970
Macon, Georgia
- Dissertation: Variation in Wood Specific Gravity of Yellow-poplar (*Liriodendron tulipifera* L. and Its Relationship to Environmental Conditions in the Southern Appalachians. (Under the direction of Bruce John Zobel).
- Bill Ross Smith, Soil Science, December, 1970
Tahoka, Texas
- Dissertation: Mineralogy of Selected Soils on the Lower Coastal Plain of North Carolina. (Under the direction of Stanley Walter Buol).
- Peter Edgar Smouse, Genetics, December, 1970
Wilmington, California
- Dissertation: Population Studies in the Genus *Pinus* L. (Under the direction of Leroy Charles Saylor).
- Kent Monroe Sorrells, Food Science, December, 1970
Oklahoma City, Oklahoma
- Dissertation: Hydrolysis of Alpha₁-Casein by the Membrane-Associated Proteinase of *Streptococcus lactis*. (Under the direction of Richard Ammon Cowman and Marvin Luther Speck).
- Robert Edward Stevens, Zoology, December, 1970
Suffolk, Virginia
- Dissertation: Hormonal Relationships Affecting Maturation and Ovulation in Largemouth Bass (*Micropterus salmoides* Lacepède). (Under the direction of Francis Eugene Hester).
- Olaf Oliver Storaasli, Engineering Mechanics, December, 1970
St. Paul, Minnesota
- Dissertation: Solution of Coupled Equations of Thermoelasticity. (Under the direction of Edward DeWitt Gurley).

- Prachoom Suwattee, Statistics, December, 1970
Bangkok, Thailand
- Dissertation: Some Estimators, Variances and Variance Estimators for Point-Cluster Sampling of Digraphs. (Under the direction of Charles Harry Proctor).
- Kenneth Robert Tenore, Zoology, December, 1970
Cambridge, Massachusetts
- Dissertation: The Macrobenthos of the Pamlico River Estuary, North Carolina. (Under the direction of John Eyres Hobbie).
- Lawrence Richard Valcovic, Genetics, December, 1970
Gloversville, New York
- Dissertation: Genetic and physiological response of adult *Bracon Hebetor* (Say) to alkylation by ethylenimine and apholate. (Under the direction of Daniel Swartwood Grosch).
- Nathaniel Walker, Forestry, December, 1970
Stillwater, Oklahoma
- Dissertation: Tree Stem Frequency Distribution and Size-Class Association in Natural Forest Types. (Under the direction of William L. Hafley and Charles H. Proctor).
- Wendell Edgar Wall, Genetics and Botany, December, 1970
Dover, Florida
- Dissertation: An Ultrastructural Survey of Glandular Tissue in *Gossypium*. (Under the direction of Ernest Aubrey Ball and Stanley George Stephens).
- Robert Carl Ward, Biological and Agricultural Engineering, July, 1970
Jackson, Mississippi
- Dissertation: Network Theory Applied to Water Management in Poultry Processing. (Under the direction of David Alan Link).
- Srisurang Wathana, Crop Science, December, 1970
Bangkok, Thailand
- Dissertation: Absorption, Translocation, and Metabolism of 4-(2,4-Dichlorophenoxy) butyric Acid in Soybean and Cocklebur. (Under the direction of Frederick Thomas Corbin and Thomas William Waldrep).
- Robert Donald Wauchope, Chemistry, December, 1970
Corvallis, Oregon
- Dissertation: The Solubility of Aromatic Hydrocarbons in Water. (Under the direction of Forrest W. Getzen).
- Dennis Charles Westhoff, Food Science, December, 1970
Afton, New York
- Dissertation: The Proteinase System of a Slow Acid Producing Mutant of *Streptococcus lactis*. (Under the direction of Richard Ammon Cowman and Marvin Luther Speck).
- Edwin Leon Wiles, Botany, August, 1970
Kernersville, North Carolina
- Dissertation: Effects of Short Chilling Intervals on the Germination and Growth of Cotton Seeds. (Under the direction of Robert J. Downs).

- Haskell Eugene Willingham, Nutrition, August, 1970
Broken Bow, Oklahoma
- Dissertation: The Antagonistic Effect of Manganese on Iron Metabolism in Chicks. (Under the direction of Charles H. Hill).
- Raymond Shih-Hsien Yang, Entomology, August, 1970
Taiwan, China
- Dissertation: Comparative Studies on the *in vitro* Metabolism of Diazinon and Diazoxon in the Rat and the Housefly. (Under the direction of Walter Carl Dauterman).

Awards for Achievement

1970-1971

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

Agricultural Council Outstanding Club Member Awards:

- Agronomy*: Paul J. Keeler, Claverack, New York
Horticulture: Gary B. Parrott, Asheville
Wildlife Biology: Donald R. Patterson, Reidsville
Agricultural Engineering: Thomas C. Hege, Lexington
Agricultural Economics: Duty D. Greene, Asheville
Agricultural Institute: T. Pender Sharp, Sims
Animal Science: Thomas E. Johnson, Jr., Dobson
Poultry Science: Roy D. Williamson, Wilkesboro
Life Science Club: Edgar S. Clark, Cary

Agricultural Economics:

- Wall Street Journal Student Achievement Award: Danny K. Bailey, Rocky Mount

Agronomy:

- Senior Highest Scholastic Average in Agronomy: Ronald T. Burleson, New London
American Society of Agronomy Award, Most Outstanding Senior: Harrell G. Todd, Yadkinville
Agronomy Club Leadership Award: Justus B. Coltrain, Jr., Jamesville

Animal Science:

- American Society of Animal Science Senior Scholarship Awards: Carl Daniel Pless, Jr., Rockwell; and Pamela Luther Witaszek, Salisbury

Biological and Agricultural Engineering:

- American Society of Agricultural Engineers, Student Honor Award: Thomas V. Honeycutt, Jr., Four Oaks
Senior Honor Award in Biological and Agricultural Engineering-Technology Program: Thomas C. Hege, Lexington

Gamma Sigma Delta:

- Senior Certificate: Linwood P. Boshier, Mechanicsville, Virginia (Zoology)

Horticultural Science:

- Burpee Award: Donald C. Coston, Hendersonville
Outstanding Senior Horticulturist Award: Robert D. Lineberger, Dallas
L. M. Ware National Award for the Best Collegiate Paper: Robert D. Lineberger, Dallas

Zoology:

- Most Outstanding Student: Donald R. Patterson, Reidsville

SCHOOL OF DESIGN

- North Carolina Section of the Southeastern Chapter of the American Society of Landscape Architects Book Award*: David Mitchell Walker, Pittsburgh, Pennsylvania

The Alcoa Book Award: Barna Allen Farrell, Troy; Walter Waldermiere Wiebe, Raleigh.

The Industrial Designers Society of America Certificate of Merit: Margaret Dean Brickhouse Bell, Greenville

The American Institute of Architects School Medal: Marian Lee Scott, Raleigh

The American Institute of Architects Certificate: Ellis Faucett Hammond, Delmar, Delaware

Alpha Rho Chi Medal: Theophilus Jacob Pearce, III, Ruston, Louisiana

North Carolina Chapter of The American Institute of Architects Book Award: Theophilus Jacob Pearce, III

Walter Hook Book Award: Jerry Wood Childers, Atlanta, Georgia

SCHOOL OF EDUCATION

Agricultural Education Club Award: most outstanding senior graduating at end of fall semester, Maurice Irving McAlister, Reidsville; graduating at end of spring semester, Gary Richardson Griffin, Graham; most outstanding senior for the school year, William Hubert Buckner, Burnsville

Education Council Plaque: Thomas Lee Dreps, Raleigh, Industrial and Technical Education; Janet Johnson Peregoy, Raleigh, Math Education

Education Council Achievement Award: Thomas B. Prieto, Oradell, New Jersey, Industrial Arts Education; James W. Humphrey, Cary, Vocational Industrial Education; Jimmy Lynn Hipps, Valdese, Science Education

Kappa Phi Kappa Scholarship Medal: Francis Ray Johnson, Kinston

SCHOOL OF ENGINEERING

Dean's Leadership Award: Gareth E. Hayes, Greensboro (Senior, Civil Engineering)

The Humanitarian Award: Eugene F. Tison, III, Chapel Hill (Senior, Chemical Engineering)

The Outstanding Engineering Senior Award: Jimmy W. Bordeaux, Bladenboro (Senior, Mechanical Engineering)

The Outstanding Engineering Citizen Award: Richard H. McCaskill, Jr., Greensboro (Senior, Industrial Engineering)

Biological and Agricultural Engineering: American Society of Agricultural Engineers Outstanding Senior Award: Thomas V. Honeycutt, Jr., Four Oaks

Chemical Engineering: Institute of Chemical Engineers Outstanding Senior Award: William Ross Davis, Butner

Civil Engineering: American Society of Civil Engineers Award to Outstanding Seniors: Jorge Luis Cowley, Fayetteville; Milton Reid Hodges, Whiteville; Ronnie Milford Thompson, Mt. Olive; Robert Joseph Munchinski, Latrobe, Pennsylvania; Associated General Contractors Award to Outstanding Senior in Civil Engineering Construction Option: Steven Arthur Bryan, Evergreen; North Carolina Chapter of American Public Works Association Award to Outstanding Seniors in Civil Engineering: Thomas Gilmer Corder, Elkin; Robert Joseph Munchinski, Latrobe, Pennsylvania

Electrical Engineering: Outstanding Senior Awards: Vaughn Ray Arey, Goldhill; Dennis Eugene Fort, Winston-Salem

Engineering Operations: Outstanding Senior Award: J. Omar Williams, Lexington; Friend of the Engineering Operations Society: Joseph W. Siphron, Gatesburg, Pennsylvania

Furniture Manufacturing and Management: Outstanding Senior Award: Lee H. Houston, Jr., Troy

Industrial Engineering: Outstanding Senior Award: Kenneth Dean Franklin, Asheville

Materials Engineering: Outstanding Senior Award: Keith William Greer, Boone;

J. C. Steel Ceramic Engineering Scholarship Cup: Richard Charles Avery, Arlington, Massachusetts

Mechanical and Aerospace Engineering: American Institute of Aeronautics Outstanding Achievement Award: James Owen Carson, Jr., Concord; American Institute of Aeronautics and Astronautics Chairman's Certificate: Jeryl Rae Hill, New Bern; American Society of Mechanical Engineer's Certificate Award: Steven Doak, Charlotte; American Society of Mechanical Engineers' Faculty Advisor's Award: Glenn Davis, Castle Hayne

Nuclear Engineering: Outstanding Senior Award: Charles Martin Craft, Portland, Oregon

SCHOOL OF FOREST RESOURCES

Xi Sigma Pi Senior Awards: Patricia Hart Gerwig, Apex; Clarence Allen Dykes, Savannah, Georgia

Xi Sigma Pi Freshman Award: Donald Chris Thompson, Mount Olive

Biltmore Scholarship Awards: Charles Dempsey Combs, Hindman, Kentucky; James Thomas Morgan, Corapeake

Conger Scholarship Awards: Driss Kamili Drissi, Meknes, Morocco; Samuel Comer Long, Severn

Homelita Honor Award: Donald Wayne Simmons, Pittsburgh, Pennsylvania

Paper Industry Management Association Awards: (Southern Division) David Earl Fowler, Jacksonville, Florida; (Southeastern Division) Tony Eugene Parson, Roseboro

Rho Phi Alpha Award: Robert Raymond Serino, Bronx, New York

Weyerhaeuser Fellowship Awards: Robert Cornell Eckert, Granite City, Illinois; Robert John Weir, Raleigh

THE SCHOOL OF LIBERAL ARTS

The Liberal Arts Scholastic Award: Anne Gannon Ammons, Carteret, New Jersey

SCHOOL OF PHYSICAL AND MATHEMATICAL SCIENCES

The Chemical Rubber Company Award for Outstanding Achievement in Freshman Chemistry: Michael Kenneth Hanafey, Statesville

The Merck Index Award for Scholastic Achievement in Chemistry: Alexander David Kowalczyk, Raleigh

Merck Awards for Outstanding Performance as Graduate Teaching Assistants in Chemistry: William Harlee Bordeaux, Jr., Grand Blanc, Michigan; Walter Cary Eaton, Camden, South Carolina; Mitchell James Hazouri, Raleigh; Rodger Nolan Jenkins, Manquin, Virginia; Robert James Leonard, Jr., Baltimore, Maryland; Charles Hambly McDonald, Raleigh; Catherine Walston Wooten, Raleigh; Clifton Woods, III, Charlotte

Award for Outstanding Senior in the Department of Mathematics: Ronald Keith Painter, Old Fort

Award for Outstanding Junior in the Department of Mathematics: Archie Henry Muse, Carthage

Awards for Outstanding Sophomores in the Department of Mathematics: Pamela Joan Naylor, Sanford, and Mary Margaret Ogburn, Winston-Salem (Tie)

SCHOOL OF TEXTILES

American Association of Textile Chemists and Colorists Award: James R. Thaggard, Cary

American Association for Textile Technology Award: Kim E. McAleer, Luray, Virginia

Harry Ball Honor Award: David M. Brown, Raleigh
Delta Kappa Phi Textile Fraternity: Outstanding Senior of the Year Award:
William E. Baldwin, III, Tar Heel
Saul F. Dribben Memorial Award: Robert C. Lewis, Wilkesboro
Everett C. Drake Honor Award: James W. Rucker, Statesville
Lawrence Iason Honor Award: Roger L. Souther, Raleigh
North Carolina Textile Manufacturers Association Award: David P. Turner,
Burlington
Phi Psi Textile Fraternity Award: David P. Turner, Burlington
John M. Reeves Scholarship: Wayne Booth, Gastonia
Harry Riemer Honor Award: Barry G. Wyatt, Glade Valley
Chester H. Roth Honor Award: Larry W. Hopkins, Burlington
Sigma Tau Sigma Scholarship Fraternity Award: Thomas M. Ketner, Clemmons
Textile Veterans Association Honor Award: Jack S. Rogers, Greensboro
John E. Reeves Award: John M. Mebane, Rocky Mount
Donald F. McCullough Award: Wayne Hill, Fayetteville

ALUMNI ATHLETIC TROPHY

Alfred H. Heartley, Clayton

PHI KAPPA PHI, NATIONAL HONOR SCHOLARSHIP SOCIETY

Intellectual Achievement—Ph.D. Candidates: Charles F. Abrams, Jr., Selma; Peter M. Burrows, Salisbury, Rhodesia; Richard M. Philpot, South Pasadena, California

Intellectual Achievement—M.S. Candidates: Linda Bradshaw Bordeaux, Jamestown, New York; Roy Dean Rhue, Winston-Salem; Randall L. Scholl, Arrowsmith, Illinois; Neill S. Smith, Raleigh

Highest Scholastic Achievement—Senior: Jimmy Wilson Bordeaux, Hampton, Virginia

Highest Scholastic Achievement—Junior: Winston Luther Ezzell, Concord

Highest Scholastic Achievement—Sophomore: John David Whitcomb, Newport News, Virginia

AIR FORCE ROTC AWARDS

American Legion ROTC General Military Excellence Award: Cadet Colonel Charles M. Craft, Portland, Oregon (Gold Medal); Cadet Captain Joseph C. Allen III, Cary (Silver Medal).

American Legion ROTC Scholastic Award: Cadet Major Terrence F. Deaton, Star (Gold Medal); Cadet Captain William H. Worsley, Greenville (Silver Medal).

Armed Forces Communications and Electronics Association Award: Cadet Major Stephen E. Dorman, Conway, South Carolina

Daughters of the Founders and Patriots of America Medal: Cadet Major Steven A. Bryan, Evergreen

Sons of the American Revolution Medal: Cadet First Lieutenant Mark F. Richardson, Stokesdale

Reserve Officers Association Membership Award: Cadet Major David E. Warren, Newton Grove

Reserve Officers Association Medal: Cadet Captain Haywood R. Starling, Jr., Raleigh

Reserve Officers Association Certificates: Cadet Major Richard A. Genaille, Winston-Salem; Cadet Sergeant Jack D. Liverman, Jr., Humacho, Puerto Rico

Air Force Times Award: Cadet Major John F. Norris, Salisbury

Community Service Award: Cadet First Lieutenant Jeffrey B. Snowden, Raleigh

Professor of Aerospace Studies Award: Cadet Colonel Charles M. Craft, Portland, Oregon

Major General William C. Lee Award: Cadet Lt. Colonel John A. Smith, Raleigh
Commandant of Cadets Award: Cadet Colonel Robert J. McCormick, Hazlet, New Jersey

Cadet of the Year Awards: Cadet Captain Charles B. Clayton, Raleigh; Cadet Staff Sergeant Douglas E. Utley, Raleigh; Cadet Airman First Class James M. Nau, Hickory

General Dynamics Award: Cadet Master Sergeant Francis Ciechowski, Sanford

Arnold Air Society Award: Cadet Staff Sergeant Jesse L. Lewis, Pikeville

Society of American Military Engineers Award: Cadet Colonel Charles M. Craft, Portland, Oregon

Honor Flight Leader Award: Cadet Captain Stephen P. Stowe, Raleigh

ARMY ROTC AWARDS

American Legion Medals for Military Excellence: Ronald G. Pearson, Clinton; Charles L. Ingram, Greensboro

American Legion Medals for Scholastic Excellence: Welcome W. Pryor, Jr., Bat Cave; Ernest C. Pearson, Charlotte

Armed Forces Communications and Electronics Association Medal: Jacob A. Palmer, III, Lexington

Daughters of the Founders and Patriots of America Medal: Thomas B. Jackson, Hickory

Sons of the American Revolution ROTC Medal: Fleming H. Morrison, Jr., Manquin, Virginia

Reserve Officers Association Medal: William M. Litaker, Belmont

Association of the U. S. Army Medal: William R. Taylor, Houston, Texas

Association of the U. S. Army Special Award: Paul H. Spivey, Greenville

Department of the Army Superior Cadet Awards: John D. Culp, Pleasant Garden; Paul H. Spivey, Greenville; Donald W. McPhail, Newport News, Virginia; Ronald G. Pearson, Clinton

Certificate of Meritorious Leadership Achievement: David G. Callaway, Banner Elk

Colonel John W. Harrelson Award: Ted D. Peiffer, Glenside, Pennsylvania

Pershing Rifles Awards: Ted D. Peiffer, Glenside, Pennsylvania; LeRoy S. Ramsey, Wilson; James D. Callahan, Lexington

Reserve Officers Association Membership Award: James B. Raper, Whiteville

OUTSTANDING TEACHER AWARDS

This year the graduating seniors have selected two recipients for the outstanding teacher awards. Each award is accompanied by a \$500 check from the North Carolina State Alumni Association.

The awards are announced each year as part of the Commencement exercises.

USAF ROTC Cadets Commissioned

1970-1971

TO BE COMMISSIONED ON 15 MAY 1971

*Campbell, Charles Kenneth	.....	Gastonia
*Craft, Charles Martin	.....	Portland, Oregon
*Deaton, Terrence Franklin	.....	Star
*Dorman, Stephen Eugene	.....	Conway, South Carolina
*Dunning, Stephen John	.....	Durham
*McCormick, Robert James	.....	Hazlet, New Jersey
*Smith, John Andrew, Jr.	.....	Raleigh
*Snowden, Jeffrey Brent	.....	Raleigh
*Warren, David Earl	.....	Newton Grove
Alley, Robert Latham	.....	Myrtle Beach, South Carolina
Bryan, Steven Arthur	.....	Evergreen
Carter, Charles Allen	.....	Kannapolis
Clayton, James Vance, Jr.	.....	Raleigh
Fore, Charles Milton	.....	Smithfield
Frazelle, David Randall	.....	Alexandria, Virginia
Fuhrmeister, Keith Warren	.....	Williamsburg, Virginia
Garrett, Leland Earl, Jr.	.....	Greenville, South Carolina
Genaille, Richard Alexander, Jr.	.....	Winston-Salem
Johnson, William Terry	.....	North Wilkesboro
Jones, Ronald Alvis	.....	Winston-Salem
Livengood, John Michael	.....	Goldboro
Marlow, Ronald Leecil	.....	Statesville
Palmer, Chester Delacy, III	.....	Denmark, South Carolina
Pope, Ray Glenn, Jr.	.....	Perry, Florida
Roberts, Alfred Mack	.....	Durham
Simmons, Donald Wayne	.....	Pittsburgh, Pennsylvania
Stewart, William Fred	.....	Ramsey, New Jersey
Van Deman, John McLaughlin	.....	Afton, Virginia

COMMISSIONED ON 21 DECEMBER 1970

Livingston, William Harry, II	.....	Newport
Moore, Eric Nichols	.....	Durham
Reece, James Edward	.....	Booneville
Williams, Courtney Evan	.....	Key West, Florida

*Distinguished Military Graduate

Army ROTC Cadets Commissioned

1970-1971

TO BE COMMISSIONED ON 15 MAY 1971

*Callaway, David G.	Banner Elk
*Christofferson, David T.	Glenview, Illinois
*Collins, Phillip L.	Raleigh
*Cooke, James H.	Raleigh
*Deas, Alfred, Jr.	Wilmington
*Dibbert, Bernard W., Jr.	Fayetteville
*Lewis, Robert C.	North Wilkesboro
*May, Terry T.	Raleigh
*Palmer, Jacob A., III	Lexington
*Pearson, Ronald G.	Clinton
*Reynolds, Dwight C.	Frederick, Maryland
*Vaughan, David H.	Virgilina, Virginia
*Wilson, Vernon C.	Asheboro
Baldwin, William E., III	Bridge City, Texas
Bruce, John W.	Murphy
Bunn, William J.	Wilson
Burleson, Ricky M.	Albemarle
Butler, George B., Jr.	Gainesville, Florida
Campisi, Michael T.	Manchester, Vermont
Davis, Glenn A.	Castle Hayne
Englar, John D.	Butler, Maryland
Gordan, Leslic N.	Fort Lee, New Jersey
Guffey, Steven E.	Troy
Hammond, Ellis F.	Delmar, Delaware
Harms, Jan C.	Homewood, Illinois
Harris, Walter R., Jr.	Fort McPherson, Georgia
Herrington, James M.	Waynesboro, Georgia
Joyce, Archer T.	Leaksville
Martin, Jeffrey	Kannapolis
McDuffie, Charles N.	Dunn
Meier, Douglas B.	Raleigh
Millsaps, Harvey E., Jr.	Mooreville
Nash, Albert M., Jr.	Raleigh
Nowell, Robert B., Jr.	Garner
O'Meara, John F.	Potomac, Maryland
Powell, James R.	Raleigh
Rann, Stephen L.	Cologne, New Jersey
Skerrett, John R.	Cedar Mountain
Sparks, Edward J.	Chapel Hill
Todd, Richard W.	Fayetteville
Watson, William F.	Durham
Zimmerman, David G.	Greensboro

*Distinguished Military Graduate

COMMISSIONED DECEMBER 1970

Anheuser, Lee R. Wauwatosa, Wisconsin
 Cave, Stanley M., III Brooklyn, New York
 Lindsay, William H. Gastonia
 Ramee, Michael J. Savannah, Georgia

TO BE COMMISSIONED JULY AND AUGUST 1971

*Bradsher, John R. Hurdle Mills
 *Mills, Glenn M. Charlotte
 Almond, Walter F. Badin
 Ammons, Victor M. Carteret, New Jersey
 Bales, Stephen E. Monroe
 Ball, Robert F. Indianapolis, Indiana
 Brady, Alan L. Liberty
 Bruce, Timothy L. Spring Lake
 Cloninger, Phillip L. Newton
 Covington, Robert E. Winston-Salem
 Furr, James E. Concord
 Gregory, Eugene M. Statesville
 Hendershott, David A. Arlington, Virginia
 Kennedy, Douglas L. Fayetteville
 Longbrake, Rickie L. Spring Lake
 Mahan, Michael F. Fayetteville
 Porter, John D. Eden
 Pritchard, Walter W. Greensboro
 Rose, William C. Clinton
 Sams, William D., Jr. Brevard
 Smith, Ralph E. Statesville
 Taylor, Henry T. Rockingham
 Williams, George V. Raleigh
 Yost, Frederick J. Brooklyn, New York

*Distinguished Military Graduate

Table 1. Mean (SD) age, height, weight, and body mass index (BMI) of the participants in each group

Group	Age (years)	Height (cm)	Weight (kg)	BMI (kg m ⁻²)
Control	12.1 (0.3)	150.1 (6.1)	40.1 (10.1)	17.8 (2.8)
Low	12.1 (0.3)	150.1 (6.1)	38.1 (9.1)	16.8 (2.6)
High	12.1 (0.3)	150.1 (6.1)	42.1 (11.1)	18.8 (3.0)

control group. The low and high groups were significantly heavier than the control group ($P < 0.05$).

There were no significant differences between the groups in the number of participants who were overweight or obese. The number of participants who were overweight or obese in each group is shown in Table 2.

There were no significant differences between the groups in the number of participants who were overweight or obese in each group.

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Eighty-Second

Annual Commencement

North Carolina State University at Raleigh

Additions

pg. 17

22

23

24

25

26

27

28

30

32

33

34

35

39

46

Errors

pg. 16

17

34

31

67

68

32

37

70

26

Saturday, May 15

Nineteen Hundred and Seventy-One

Degrees Awarded 1970-71

Musical Program

EXERCISES OF GRADUATION

May 15, 1971

CARILLON CONCERT: 8:30 A.M. The Memorial Tower
Miriam Bailey, Carillonneur

COMMENCEMENT BAND CONCERT: 8:45 A.M.
William Neal Reynolds Coliseum

Overture: Fanfare and Capriccio Schaefer

Marche Slav Tchaikovsky

Chorale Nellybel

Chester Schuman

PROCESSIONAL: 9:15 A.M.

March Processional Grundman

RECESSIONAL:

University Grand March Goldman

NORTH CAROLINA STATE UNIVERSITY COMMENCEMENT BAND
Donald B. Adcock, Conductor

Marshals provided by Golden Chain and Alpha Phi Omega

The Alma Mater

Words by:

ALVIN M. FOUNTAIN, '23

Music by:

BONNIE F. NORRIS, JR., '23

Where the winds of Dixie softly blow
o'er the fields of Caroline,

There stands ever cherished N. C. State,
as thy honored shrine.

So lift your voices! Loudly sing
from hill to oceanside!

Our hearts ever hold you, N. C. State,
in the folds of our love and pride.

Exercises of Graduation

William Neal Reynolds Coliseum

May 15, 1971

PROCESSIONAL, 9:15 A.M. Donald B. Adcock
Conductor, North Carolina State University Commencement Band

The audience is requested to remain seated during the Processional

PRESIDING John Tyler Caldwell
Chancellor, North Carolina State University

INVOCATION Oscar B. Wooldridge
*Coordinator of Religious Affairs
North Carolina State University*

ADDRESS John Tyler Caldwell
Chancellor, North Carolina State University

CONFERRING OF DEGREES John Tyler Caldwell
Chancellor
Harry C. Kelly
Provost

Candidates for baccalaureate degrees presented by Deans of Schools. Candidates for advanced degrees presented by Dean of the Graduate School.

ANNOUNCEMENT OF GOODWIFE DIPLOMAS John F. Hester
President, Student Senate

ANNOUNCEMENT OF OUTSTANDING TEACHER AWARDS Cathy J. Sterling
President of Student Body

REMARKS TO THE GRADUATING CLASS William C. Friday
President, University of North Carolina

ALMA MATER

BENEDICTION

RECESSIONAL

The audience is requested to remain seated until recessional music is concluded.

Social Hour and Distribution of Diplomas

School and Department Locations

11:15 A.M.

School of Agriculture and Life Sciences

Adult Education	216 Poe Hall
Agronomy, Crop Science, Plant Protection and Soil Science	149 and 251 Williams Hall 5 A Polk Hall
Animal Science	158 Weaver Laboratories
Biological and Agricultural Engineering	Diploma presentation 124 Dabney Hall; reception to follow in 3533 Gardner Hall
Biochemistry	
Biological Sciences Major	
Botany	
Entomology	
Genetics	
Microbiology	
Plant Pathology	
Wildlife Biology	
Zoology	
Conservation	124 Dabney Hall and 3533 Gardner Hall or 149 and 251 Williams Hall
Economics	Erdahl-Cloyd Union Theatre and 256 258 Erdahl Cloyd Union
Food Science	105 Schaub Food Science Building
Horticultural Science	121 and 159 Kilgore Hall
Poultry Science	224 Scott Hall
Rural Sociology	Forest Hills Baptist Church

School of Design . . . Erdahl Cloyd Union Ballroom 11:15;
social hour 2.30 p.m. Brooks Hall Garden

School of Education . . . Poe Hall

School of Engineering

Biological and Agricultural Engineering	158 Weaver Laboratories
Chemical Engineering	113 Riddick Hall
Civil Engineering	Lobby of Mann Hall
Electrical Engineering	Thompson Theatre
Engineering Mechanics	119 Riddick Hall
Engineering Operations	William Neal Reynolds Coliseum
Furniture Manufacturing and Management	234 Riddick Hall
Industrial Engineering	234 Riddick Hall
Mechanical and Aerospace Engineering	242 Riddick Hall
Materials Engineering	Alumni Building
Nuclear Engineering	Burlington Nuclear Laboratories

School of Forest ResourcesCarmichael Gymnasium—West End, Main Floor
School of Liberal ArtsForest Hills Baptist Church
School of Physical and Mathematical Sciences —Lobby, Dabney Hall
School of Textiles Nelson Textile Auditorium

ROTC Commissioning Ceremony

William Neal Reynolds Coliseum

May 15, 1971

PROCESSIONAL MARCH 2:00 P.M. Donald B. Adcock
Conductor, North Carolina State University Commencement Band

The audience is requested to remain seated
until processional music is completed.

NATIONAL ANTHEM

INVOCATION J. Randall Mishoe
Baptist Chaplain, N. C. State University

INTRODUCTIONS John Tyler Caldwell
Chancellor, North Carolina State University

ADDRESS Robert N. Ginsburgh
*Major General, U. S. Air Force, Commander, Aerospace Studies
Institute, Maxwell AFB, Alabama*

ADMINISTRATION OF OATH OF OFFICE Colonel Owen T. Reeves
Professor of Aerospace Studies
Colonel William L. Boylston
Professor of Military Science

PRESENTATION OF CERTIFICATES

OF COMMISSION Major General R. N. Ginsburgh
U. S. Air Force
Colonel Jerry M. Sage
Deputy Chief of Staff, ROTC, Third U. S. Army

BENEDICTION

Academic Costume

Academic gowns represent a tradition handed down from the universities of the Middle Ages. These institutions were founded by the Church; the students, being clerics, were obliged to wear the prescribed gowns at all times. Round caps later became square mortarboards; the hoods, originally cowls attached to the gowns, could be slipped over the head for warmth.

Many European universities have distinctive caps and gowns which are different from those commonly used in this country. Some of the gowns are of bright colors and some are embellished with fur. A number of these may be noted in the procession.

The usual color for academic gowns in the United States is black. The bachelor's gown is worn closed, the master's and doctor's may be worn open or closed. The shape of the sleeve is the distinguishing mark of the gown: bachelor long pointed sleeves; master oblong, square cut in back with an arc cut away in front; doctor—bell shaped.

Caps are black. The tassels for the Ph.D. degree are gold and those for other graduate and professional degrees may be of the color corresponding to the trimmings on the hoods. The color of the tassels for bachelor's degrees indicates the curriculum of the graduate: Agriculture, maize; Design, brown; Education, light blue; Engineering, orange; Forest Resources, russet; Liberal Arts, white; Physical and Mathematical Sciences, yellow; Textiles, wine red.

The hoods are lined with the color of the institution from which the wearer received his degree. The trimming or collar of the hood is the color which designates the degree: Liberal Arts, white; Fine Arts and Architecture, brown; Science, golden yellow; Music, pink; Divinity, scarlet; Law, purple; Engineering, orange; Philosophy, blue; Medicine, green; Forestry, russet; Textiles, wine red.

Honorary degree hoods are distinguished as follows: Master of Arts (M.A.), white; Doctor of Humane Letters (L.H.D.), white; Doctor of Science (Sc.D.), golden yellow; Doctor of Divinity (D.D.), scarlet; Doctor of Laws (L.L.D.), purple.