SIXTH ANNUAL CATALOGUE

OF THE

NORTH CAROLINA COLLEGE

OF

AGRICULTURE AND MECHANIC ARTS,

RALEIGH.

1894-'95.

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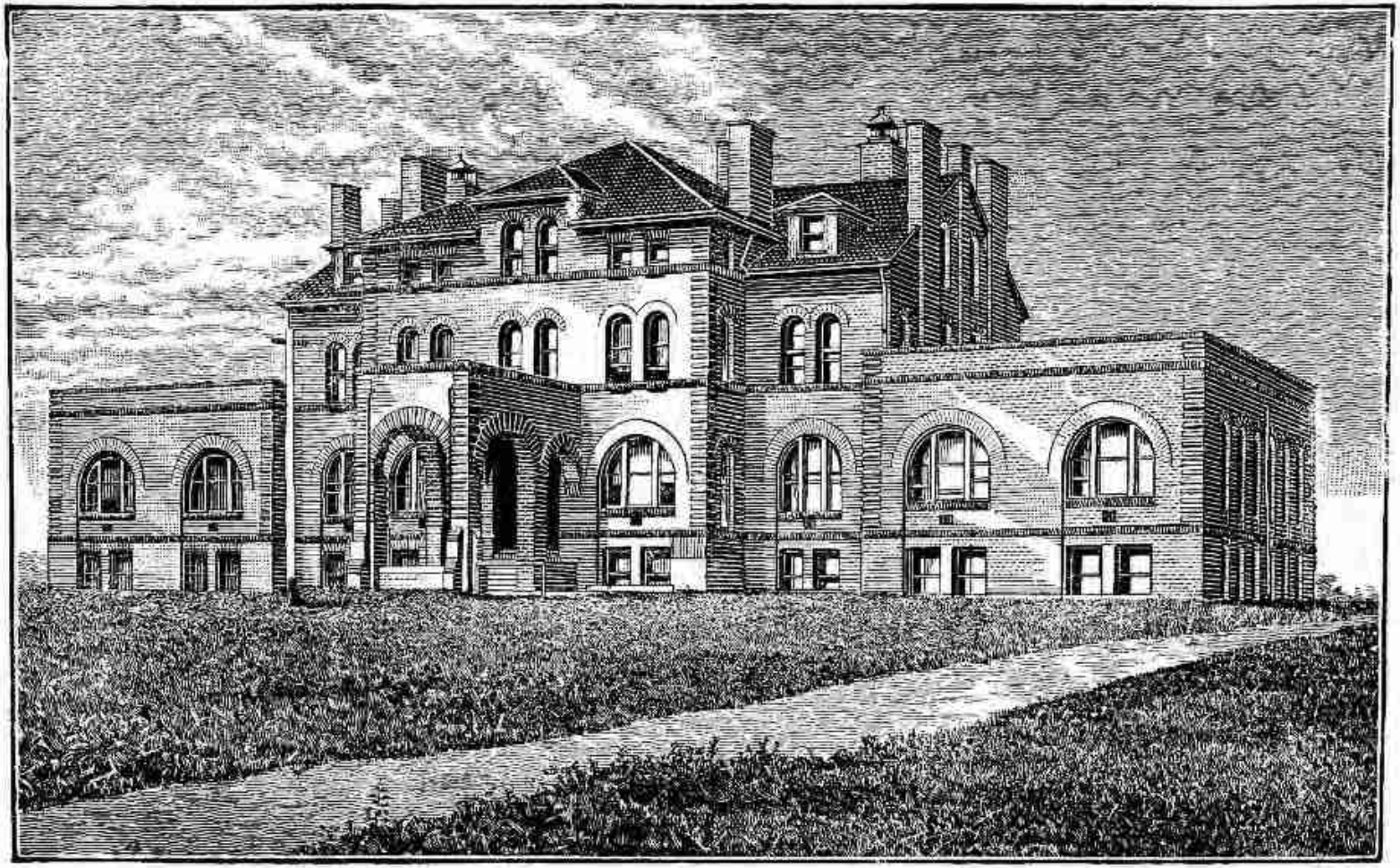

NORTH CAROLINA COLLEGE OF AGRICULTURE AND MECHANIC ARTS. (MAIN BUILDING.)

FACULTY AND OFFICERS, 1895-'96.

ALEXANDER Q. HOLLADAY,
President and Professor of History.

W. F. MASSEY, C. E.,
Professor of Horticulture, Arboriculture and Botany.

W. A. WITHERS, A. M.,
Professor of Pure and Agricultural Chemistry, and Secretary.

D. H. HILL, A. M.,
Professor of English.

B. IRBY,
Professor of Agriculture.

W. C. RIDDICK, A. B., C. E.,
Professor of Mathematics and Civil Engineering.

RICHARD HENDERSON, LIEUT. U. S. N.,
Professor of Military Tactics and Physics.

N. R. CRAIGHILL, M. E., E. E.,
Professor of Mechanical and Electrical Engineering.

R. E. L. YATES, A. M.,
Adjunct Professor of Mathematics.

F. E. EMERY, B. S.,
Assistant Professor of Agriculture.

CHARLES M. PRITCHETT, M. E.,
Instructor in Mechanics.

CHARLES B. PARK,
Superintendent of Shops.

B. S. SKINNER,
Assistant in Farm Practice, and Farm Superintendent.

F. P. WILLIAMSON, D. V. S.,
Instructor in Veterinary Science.

S. E. ASBURY, B. S.,
Assistant in Chemistry.

W. A. BULLOCK, B. S.,
Assistant in Dairying.

J. A. BIZZELL, B. S.,
Assistant in Chemistry.

W. K. DAVIS, JR., B. E.,
Assistant in Physics.

DAVID CLARK, B. E.,
Assistant in Shops.

C. D. FRANCKS, B. E.,
Tutor of the Sub-Freshman Class.

MRS. SUE C. CARROLL,
Matron.

J. B. DUNN, M. D.,
Physician.

STUDENTS (240).

POST-GRADUATES (9).

Name.	*County.*	*Major Course.*
SAMUEL ERSON ASBURY	Gaston	Chemistry.
B. S. '93, N. C. College of Agriculture and Mechanic Arts.		
CHARLES EDWARD CORPENING	Caldwell	Mech. Eng.
B. E. '94, N. C. College of Agriculture and Mechanic Arts.		
CHARLES DUFFY FRANCKS	Onslow	
B. E. '93, N. C. College of Agriculture and Mechanic Arts.		
CHARLES BOLLING HALLADAY	Wake	Mech. Eng.
B. E. '93, N. C. College of Agriculture and Mechanic Arts.		
CHARLES PEARSON	Polk	Mech. Eng.
B. E. '94, N. C. College of Agriculture and Mechanic Arts.		
CHARLES MARCELLUS PRITCHETT	Cartersville, Ga	Mech. Eng.
B. S. '91, Georgia School of Technology.		
BENJAMIN FRANKLIN WALTON	Wake	Agriculture.
B. S. '94, N. C. College of Agriculture and Mechanic Arts.		
CHARLES BURGESS WILLIAMS	Camden	Chemistry.
B. S. '93, N. C. College of Agriculture and Mechanic Arts.		
LOUIS THOMAS YARBROUGH	Caswell	Mech Eng.
B. E. '93, N. C. College of Agriculture and Mechanic Arts.		

SENIOR CLASS (23). 27

Name.	*County.*	*Admitted.*
JAMES ADRIAN BIZZELL	Cumberland	1891
JOHN ISHAM BLOUNT	Sampson	1891
JAMES WASHINGTON BRAWLEY	Iredell	1891
GEORGE TARRY BULLOCK	Vance	1891
WALTER AUSTIN BULLOCK	Vance	1891
DAVID CLARK	Wake	1892
GEORGE WASHINGTON CORBETT, JR.	Pender	1891
EDWIN SPEIGHT DARDEN	Greene	1891
WILLIAM KEARNEY DAVIS, JR	Franklin	1891
JOSEPH CHARLES DEY	Currituck	1891
LEE BORDEN ENNETT	Carteret	1891
ISAAC HENRY FAUST	Randolph	1891
CHARLES WYLLIS GOLD	Wilson	1891
WILLIAM HENRY HARRISS	Warren	1891
CHRISTOPHER MILLER HUGHES	Wake	1891

Name.	*County.*	*Admitted.*
MALCOLM BEALL HUNTER	Mecklenburg	1891
SAMUEL CHRISTOPHER MCKEOWN	South Carolina (State)	1891
MANN CABE PATTERSON	Orange	1890
ABRAM HINMAN PRINCE	Vance	1891
VICTOR VASHTI PRIVOTT	Chowan	1891
HOWARD WISWALL, JR	Beaufort	1891
CHARLES GARRETT YARBROUGH	Caswell	1891

IRREGULAR.

THOMAS MARTIN ASHE	Wake	1890

JUNIOR CLASS (24).

Name.	*County.*	*Admitted.*
DANIEL ALLEN	Wake	1893
ROBERT BRUCE BEARD	Forsyth	1892
JAMES SAMUEL CRAWFORD	Wayne	1893
GEORGE STRONACH FRAPS	Wake	1893
MARION JACKSON GREEN	Rutherford	1892
JOHN THOMAS HICKS	Durham	1892
JOHN HOWARD	Edgecombe	1892
WILLIAM COLBERT JACKSON	Pitt	1892
PAUL VANCE MATTHEWS	Halifax	1892
ROBERT GRAHAM MEWBORNE	Lenoir	1892
TILON VANCE MOORE	Brunswick	1892
PAUL HAMPTON STANLEY	Wayne	1892
VAN DALEN STRONACH	Wake	1893
MARK RODGERS VICK	Northampton	1892
EMIL AUGUST WESSELL	New Hanover	1892
LEVI ROMULUS WHITTED	Alamance	1893
HENRY LLOYD WILLIAMS	Gates	1892
AMME ANEROL WILSON	Gaston	1892
WEBB CHITMOND YARBROUGH	Caswell	1892

IRREGULARS.

WILLIAM JOHNSON CARTER	Wake	1893
WILLIAM HENRY HUGHES, JR	Wake	1893
ROSCOE NUNN	Craven	1894
HENRY WILSON SANDERS	Pasquotank	1894
THOMAS JEHU SMITHWICK	Bertie	1892

SOPHOMORE CLASS (55).

Name.	*County.*	*Admitted.*
FRANK ALLEN	Wake	1894
WILLIAM MANLY BAKER	Edgecombe	1893
EDWARD GRAHAM BATTLE	Edgecombe	1893
JOSEPH SAMUEL BUFFALOE	Wake	1893
JOHN WILLIAM CARROLL	Wake	1892
FRANK JUINOR CHURCH	Vance	1893
CHARLES EDWARD CLARK	Mecklenburg	1890
WM. ALEXANDER GRAHAM CLARK	Wake	1894
NICHOLAS LOUIS GIBBON	Mecklenburg	1893
CHARLES HELSEBECK GRIFFITH	Forsyth	1893
JAMES HARPER	Caldwell	1893
CEBERN DODD HARRIS	Wake	1893
EDMUND JERRY INGRAM	Montgomery	1893
JOSEPH PEACE JENKINS	Franklin	1894
JOHN ARTHUR JONES	Person	1893
CLARENCE HAYWOOD JOYNER	Northampton	1893
THADDEUS OTIS JOYNER	Northampton	1893
CLYDE BENNETT KENDALL	Anson	1893
SIDNEY GUSTAVUS KENNEDY	Lenoir	1893
GEORGE KIRBY	Sampson	1893
JOSEPH LAWRENCE KNIGHT	Edgecombe	1889
FREDERICK CREECY LAMB	Pasquotank	1893
ANGUS FERGUSON LYTCH	Richmond	1893
JAMES TILLMAN MCGREGOR	Anson	1893
WALTER JONES MCLENDON	Anson	1893
REPTON HALL MERRITT	New Hanover	1893
WYLIE THOMAS MOSELY	Lenoir	1893
JOSEPH ALDINE MOSS	Granville	1894
ALBERT HICKS OLIVER	Duplin	1893
MAURICE JAMES O'NEIL	Vance	1894
GEORGE LANGDON PETERSON	Sampson	1893
WILLIAM BURT PHILIPS	Nash	1893
HUGH WILLIAMS PRIMROSE	Wake	1893
SAMUEL MARVIN RIDDLE	Wake	1893
WILLIS HUNTER SANDERS	Harnett	1893
JAMES MCKIMMON SAUNDERS	Pitt	1894
CHARLES MARVIN SHERRILL	Catawba	1894
JAMES ALEXANDER SINCLAIR	McDowell	1893
JAMES LEIGH SKINNER	Wake	1893
MARK SQUIRES	Union	1892
GEORGE FREDERICK SYME	Wake	1893
LAWRENCE BUTNER THOMAS	Davidson	1893

Name.	*County.*	*Admitted.*
LEA WATSON	Wake	1893
WILLIAM FOWLE WELBORN	Davidson	1893
JOEL WHITAKER	Wake	1893
BRADLEY JEWETT WOOTTEN	New Hanover	1893
GEORGE ARLINGTON WRIGHT	Robeson	1893

IRREGULARS. 4

DOSSEY BATTLE, JR	Edgecombe	1893
CHARLES HINTON BELVIN, JR	Wake	1892
ROBERT E. DARDEN	Guilford	1894
JERE EUSTIS HIGHSMITH	Sampson	1891
ANGUS ALEXANDER LEACH	Wilkes	1892
ROBERT PINCKNEY MCCRACKEN	Haywood	1893
NATHAN SNOWDEN PERKINS	Anniston, Ala	1894
CHARLES HENRY ZOELLER	Edgecombe	1893

FRESHMAN CLASS (100). 97

Name.	*County.*	*Admitted.*
JOHN ERASTUS ALBRITTON	Greene	1894
SYDENHAM BREVARD ALEXANDER, JR.	Mecklenburg	1894
THOMAS WINSLOW ALEXANDER	Mecklenburg	1894
CHARLES SKINNER ALLEN, JR	Wake	1893
SAMUEL BENJAMIN ALSOP	Halifax	1894
ESLEY OFFILT ANDERSON	Iredell	1894
DORSEY FROST ASBURY	Gaston	1893
IRVIN SIDNEY BAGWELL	Wake	1894
GEORGE MITCHELL BALDWIN	New Hanover	1894
GEORGE THOMAS BARKSDALE	Sampson	1894
ROBERT MARRIATT BATTLE	Edgecombe	1893
GEORGE LEANDER BEALL	Caldwell	1894
SIDNEY HAMILTON BECK	Burke	1894
JAMES REUBEN BENSON	Hyde	1894
ROBERT VANCE BRAWLEY	Iredell	1894
HUGH CECIL BROOKS	Pitt	1894
CLARENCE BROWN	Duplin	1894
JOHN COLE BURWELL	Mecklenburg County, Va	1894
DANIEL WORDEN BUSBEE	Sing Sing, N. Y	1894
HUGH CLEMENT	Davie	1894
WILLIAM JAMES CLEMENT	Granville	1894
HOWELL COBB	Nash	1894
WHITFIELD COBB	Wake	1894
ALBERT SIDNEY COFFIELD	Martin	1894
ANSON ELKIN COHOON	Pasquotank	1894

Name.	*County.*	*Admitted.*
HERBERT BANATINE CUNINGHAM	Person	1894
FRED CHARLES DOYLE	Wake	1894
NATHAN DANIEL EDMONSON	Edgecombe	1894
ZEBULON VANCE FAGAN	Martin	1894
BENJAMIN CAREY FENNELL	Wake	1894
JAMES BUCHANAN FORD	Wake	1894
LEWIS FORNEY	Rutherford	1893
DORSON BEVERS FOSTER	Wake	1894
DAVID BRYAN FOY	Wake	1894
GEORGE BLACKNALL FURMAN	Buncombe	1893
FRANK PORTER GATLIN	Edgecombe	1894
OSCAR HENRY GIDDENS	Sampson	1894
JESSE WESTON GILL	Wake	1894
RUFUS MCCAWLEY GWYN	Caldwell	1893
WILLIAM BRADLEY HANFF	Craven	1894
WILLIAM HENRY HAYWOOD	Jones	1894
JOHN MADISON HODGE	Wake	1893
ROBERT GUY HODGES	Lenoir	1894
WILLIAM CULLEN BRYANT HOFFMAN	Gaston	1894
JONATHAN MARION HOPKINS	Rockingham	1894
BAXTER JOHNSON HUNTER	Mecklenburg	1894
JOSEPH FREDERICK HUNTER	Halifax	1894
BENJAMIN BELL JACKSON	New Hanover	1894
JUDSON GAYLE JENKINS	Wake	1894
HARVEY JOSEPH JOHNSON	Wake	1894
KIMBROUGH JONES, JR	Wake	1894
ALPHEUS ROUNTREE KENNEDY	Lenoir	1894
RUFUS WALTER KING	Wake	1894
AUGUSTUS MARION LEWIS, JR	Wake	1893
ERNEST MCKEE LOUGEE	Wake	1893
ENOCH LUDFORD, JR	Washington	1894
JNO. COOPER STEADMAN LUMSDEN, JR.	Wake	1894
THORNTON BUTLER MATHEWS	Buncombe	1894
SIDNEY FRANKLIN MAUNEY	Rowan	1894
JOHN DUNCAN MCGREGOR	Anson	1894
ROBERT EDWARD MERONEY	Rowan	1894
JOHN HOWARD MILLER	Sing Sing, N. Y	1894
MASON MITCHELL	Tappahannock, Va	1894
FERNANDO ZOLLIE MORRIS	Henderson	1894
EDWIN BENTLEY OWEN	Davidson	1894
MOORE PARKER	Wake	1894
PAUL BLAIR PARKS	Cabarrus	1894
DAVID EMSLEY PATTERSON	Orange	1894
FREDERICK SHEPPARD PEARSON	Polk	1894

Name.	*County.*	*Admitted.*
JOHN WARD PHILIPS, JR	Edgecombe	1894
WILLIAM HOWARD PICARD	Northampton	1893
JOHN ERNEST RAMSAY	Rowan	1894
VERNON BADHAM RAMSEUR	Henderson	1894
ROBERT PERCEVAL READE	Person	1894
ALBERT EUGENE ROUNTREE	Lenoir	1894
RICHARD GIBBS SATTERWHITE	Vance	1894
BERTRAM SHEPHERD	Richmond	1894
THOMAS SKINNER SIMPSON	Wake	1893
PAUL DURWOOD SMETHURST	Wake	1894
ISAAC HALL SMITH, JR	Halifax	1894
NATHANIEL COCKE SMITH	Halifax	1894
HENRY HOLLAND SPRINGS	Davidson	1894
NUMA REID STANSELL	Robeson	1894
ARTHUR MARVIN SUTTON	Wake	1894
TEISAKU SUGISHITA	Kokufu, Japan	1894
JAMES LEAVY SWINDELL	Wake	1893
RALPH BINGHAM SYKES	Orange	1894
CLARENCE S. SYLIVANT	Greene	1894
THOMAS FULLER TERRELL	Wake	1893
SAMUEL JULIUS TURNER	Anson	1894
DALMA OZARK UZZLE	Wake	1894
CLAUD VANN	Johnston	1894
JAMES RICE WATSON	Hertford	1894
WALTER LUCAS WEAVER	Northampton	1893
WILLIAM MCRAE WEBSTER	Richmond	1894
CHARLES WHITAKER	Warren	1894
HARRISON BOYD WILLIAMS	Wake	1894

IRREGULARS.

JOSEPH NORMAN IVES	Pasquotank	1894
CHARLES WATSON PETTY	Guilford	1894
PAUL CARAN WILLIAMS	Gates	1894

SUB-FRESHMAN CLASS (29).

Name.	*County.*
SHEROD PERCY BARKSDALE	Sampson.
ZEBULON VANCE BLOUNT	Sampson.
WILLIAM MCDOWELL BURGIN	McDowell.
JUNIUS LONG CAPEHART	Vance.
RONALD ORLANDO CREDLE	Hyde.
ROBERT ALLEN DARDEN	Greene.

Name.	*County.*
JOHN FENNELL	Wake.
JAMES CLARENCE FREEMAN	Alamance.
EDWARD WOOD HALL	Halifax.
OLIVER PERCY HICKS, JR	Rutherford.
LUCIUS JAMES HOLLAND	Gaston.
ALBERT BOYD HOMESLEY	Mecklenburg.
EDWARD ROSS HUNTER	Mecklenburg.
EDWARD TUNNEL JENNETTE	Hyde.
SAMUEL CABE JOHNSTON	Orange.
EDWARD WARREN JONES	Hyde.
GEORGE LUTHER LYERLY, JR	Rowan.
EDGAR GUY PETTY	Gaston.
JAY VICTOR QUERY	Cabarrus.
ARCHIE WILLIE RAILEY	Hertford.
JAMES ROBERTSON RUSSELL	Lenoir.
LOUIS WILLIAM SMITH	Cabarrus.
WILLIAM ASHLEY STEVENSON	Wake.
WILLARD CHASE TOMLINSON	Durham.
LUTHER JAMES UNDERWOOD	Wake.
GEORGE CLIFFORD UZZLE	Johnston.
DARIUS SAMUEL WAITT	Wake.
JOHN EDGAR WALL	Johnston.
EDGAR CALVIN YARBROUGH	Caswell.

...COMMENCEMENT 1894...

ANNUAL ORATION

BY

HON. FABIUS H. BUSBEE, Raleigh, North Carolina.

BACCALAUREATE SERMON

BY

REV. W. S. CREASY, D. D., Charlotte, North Carolina.

GRADUATING CLASS.

Name.	*Degree.*	*Post-office.*
Charles Edward Corpening	B. E	Lenoir.
David Cox, Jr	B. E	Hertford.
Robert Donnell Patterson, Jr†	B. S	Durham.
Charles Pearson*	B. E	Saluda.
Zebbie George Rogers†	B E	Roxboro.
John Hyer Saunders	B. E	Grimesland.
Benjamin Franklin Walton*	B. S	Raleigh.
John McCamy Wilson	B. E	Sheva.

WITH THE DEGREE OF M. S.

Frank Theophilus Meacham	(B. S. '93)	Raleigh.

Major Course, Agriculture.

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* With first distinction in course.

† With second distinction in course.

HONOR ROLL 1893-'94.

SENIOR CLASS.

Charles Pearson ..... Saluda, Polk County.

JUNIOR CLASS.

James Adrian Bizzell ..... Fayetteville, Cumberland County.
Walter Austin Bullock ..... Williamsboro, Vance County.
Howard Wiswall, Jr ..... Winsteadville, Beaufort County.

SOPHOMORE CLASS.

George Stronach Fraps ..... Raleigh, Wake County.

FRESHMAN PRIZES IN AGRICULTURE.

Medal ..... Sidney Gustavus Kennedy ... Lenoir County.
Ten-Dollar Prize .. Charles Edward Clark ..... Mecklenburg County.
Five-Dollar Prize. James Samuel Buffaloe ..... Wake County.

THE NORTH CAROLINA COLLEGE OF AGRICULTURE AND MECHANIC ARTS

Was founded under act of the General Assembly of March 7, 1887, and was first opened for the reception of students October 2, 1889, since which time its growth has been steady and its work thorough.

The support of this College is derived chiefly from the Treasury of the United States in the shape of funds arising from the sale of public lands, thus inflicting no burden of taxation on any citizen. These acts were passed July 2, 1862, and August 30, 1890, and require the funds granted by them to each State to be applied to the "endowment, support and maintenance of at least one College, where the leading object shall be, without excluding other scientific and classic studies, *and including military tactics*, to teach such branches of learning as are related to acriculture and the mechanic arts in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and ptofessions in life."

The Jews, in scriptural times, taught each boy a trade, in addition to such mental training as they thought advisable. It was a wise provision.

Some of the very best thinkers of our own time, in this and other countries, have acknowledged the advantages of intelligent manual training of boys and young men in well equipped schools, and institutions of this kind are now being recognized as among the practical necessities of every commonwealth.

In all branches of industry the competition of the world is bringing about a closer margin of profits, and a demand is made upon men of every calling to study the very best methods and closer economy in first production. The whole trend of such instructions as we are now commencing is calculated to work out such economic results.

In an agricultural and mechanical college the student is taught to know that work is honorable, and manual labor becomes a pleasant task when performed under the encouraging eye of teachers whom the students recognize as men of ability. The labor is diversified by a proper development of the thinking and reasoning powers, and the tasks *assigned* are not so long as to prove irksome.

There is no conflict between the technical education which will be given by the agricultural and mechanical college and the established colleges and the University of the State. Taking our College as one department of learning, and the above named institutions as another, their spheres are widely different, and they should be of practical benefit each to the other, and both to the commonwealth.

North Carolina is blessed by Providence with the underlying elements of prosperity in every direction; in all of the principal crops grown in the entire country; in the capabilities of so many sections for successful cattle-raising and the production of dairy products; in its truck interests, fruit and small fruits; in its ores and minerals, its lumber and hardwoods, and in its abundant facilities for manufacturing interests of various kinds.

Brains, skill and WORK are needed to develop these interests, and the College proposes to do its full part in the education of the youth of the State, as far as it can reach them, in these all-important factors.

To make agriculture profitable is one of the great problems of the age. With its collateral pursuits, it not only has been, but always will be, the most important industrial calling of mankind.

As North Carolina is essentially an agricultural State, the Legislature has acted wisely in its conclusion to aid the interests of so large a class of its citizens by the creation of an agricultural and mechanical college, in which the very best methods and results can be studied and worked out, practically as well as theoretically.

Full courses of everything relating to the economy of the farm, including, of course, the utilization of waste, will be thoroughly studied.

Then, too, the State therein lends a helping hand to such of its youth as may desire to engage in mechanical callings of all kinds.

The College is intended not to produce theorists, but practical young men, who will become intelligent farmers, horticulturists, cattle and stock raisers, dairymen—men who will be interested in their work and who will make their work profitable.

The State also has need of good mechanics, carpenters, draughtsmen, contractors, manufacturers, architects, civil and mechanical engineers, and the College will help to make them.

In conclusion, while the College will give practical instruction to as many of our youth as it can accommodate, it is made the duty, as it will be the pleasure of the members of the Faculty of the College, to take an active part in farmers' institutes, which are accomplishing so much of good in many States in the Union, and which have happily been inaugurated by the Board of Agriculture and by the farmers themselves in our own State.

The professors will be at the service of the farmers of the State whenever they can impart such special information as may be sought at their hands. They will be glad to furnish the best methods of building and filling silos, of planning barns, stables, etc. They will also be expected to investigate and furnish thoroughly approved formulas for remedies in diseases of cattle, for destruction of insect pests, formulas for composting, etc.

COURSES OF INSTRUCTION.

The three general courses of study offered in this institution are in Agriculture, in Mechanics and in Applied Science.

In the *Freshman year* the work of the students in these courses *is the same,* and consists of Mathematics, English, Physics, Chemistry, Physiology, Botany, History and Agriculture in the class-room, and practice work in the field, greenhouse, carpenter-shop, drawing-room and physical laboratory. At the beginning of the Sophomore year the courses begin to specialize, and the student selects the one best fitted to his needs. With each of the higher classes more time is given to the technical studies of the course.

THE COURSE IN AGRICULTURE.

The technical work of this course is included in the departments of Agriculture, Horticulture and Chemistry, in either of which the student may make his thesis for grauation.

We endeavor to keep in view the fact that the course is not intended as a training-school for farm laborers, but for fitting young men for intelligent work in Agriculture, either on the practical side in directing the great army of uneducated muscle in the field or greenhouse, or on the more scientific but none the less valuable side as workers in the laboratories of Agricultural Chemistry or Botany.

The manual labor is performed during the practice hours, is only such as is considered necessary and instructive, and does not consist of mere drudgery, of which most of the students know enough already before their admission. While taught that no labor is beneatn the dignity of a thorough farmer when necessary, the chief effort will be to form habits of close observation and economical administration, and to inculcate broad ideas as to the possibilities of American agriculture, and thus send them out as *leaders in improvements* instead of mere followers in ruts of other men's making.

THE COURSE IN MECHANICS.

The technical work of this course is included in the departments of Mechanics, Applied Mathematics, and Physics, in either of which the student may make his thesis for graduation.

This is not a trade school, and it is of course not expected that our students shall necessarily adopt a trade; but if any should desire to do so, the training given here in the principles underlying all mechanical trades, as well as in their application, will make smooth the way and give the right start to all students who can remain but one or two years, preferring then to take up a trade rather than to work on to the graduating degree, which will give them position as civil or mechanical engineers.

An examination of the work for each year, as shown in the table at the end, will give an accurate idea of the qualifications of each student at any given point in the course, whether his purpose may be to adopt a trade, or only to direct with intelligent skill operations of his own business, or to seek employment in the highest branches of engineering.

THE COURSE IN APPLIED SCIENCE.

The work of this course, outside of the general studies required, is largely elective, the subjects being included under the departments of Entomology, Zoölogy, Botany, Chemistry, Physics, Applied Mathematics, etc. The graduating thesis may be made in either of these departments. The full time given to practice work in the other courses is required in this.

POST-GRADUATE WORK.

Post-Graduate courses have been established, leading to the degrees of Master of Science (M. S.) and Mechanical Engineering (M. E.). For the Master's degree the major subject may be taken in the Department of Agriculture, Horticulture or Chemistry. The minor courses offered are Agricultural Analysis, Organic Synthesis, Vertebrate Zoölogy, Vet-

erinary Science, Cryptogamic Botany, Invertebrate Zoölogy, and Electricity, two of which must be taken. For the degree of M. E. the major subject and one minor must be taken in the Department of Mechanical Engineering, and the second minor in Electrical Engineering.

A thesis, embodying the results of some original investigation, must be submitted and accepted before the final examinations are taken.

The studies in each will be carefully adapted to the expansion and development of the special lines of study selected by graduate students for a professional calling.

IRREGULAR WORK.

Students, otherwise qualified, may be allowed to elect certain studies from the regular courses already provided in the College, if no inconvenience result to the members of the regular classes.

SUB-FRESHMAN CLASS.

A sub-Freshman class has been organized to give special preparation to such young men as are unable to enter the Freshman class, and who nevertheless desire a technical education. No county will be allowed to have more representatives in this class than it has in the House of Representatives of the General Assembly.

DEPARTMENTS OF INSTRUCTION.

DEPARTMENT OF AGRICULTURE.

PROF. B. IRBY, M. S.

ASSISTANT PROFESSOR, ... F. E. EMERY, B. S.
FARM SUPERINTENDENT, ... B. S. SKINNER.
INSTRUCTOR IN VETERINARY SCIENCE, DR. F. P. WILLIAMSON.

The instruction in this department is so arranged that the students taking the course will be able to fit themselves for not only the details of farm work, but for managing farms as well. An effort is made to so blend the practical with the theoretical that a student will know *how* a thing is done, as well as *why*. The students have the following course in the lecture-room and field:

The Freshman Class has three months in "First Lessons in Agriculture," and three months in physiology. Their practice work consists in laying off ditches and terraces, constructing same, and cultivating crops, etc.

In the Sophomore year they have lectures on hygiene of the farm, drainage, description and use of farm implements, cultivation and harvesting of crops. They also have an advanced course in physiology and anatomy. Practice work the entire year correlates with their class-room work.

The Junior Class has zoölogy, lectures on veterinary science, and dairying. The latter includes selection of dairy herds, development of herds, calculation of feed rations, milking, ripening of cream, use of separator, churning, etc., keeping records and tests of cattle, calculation of milk values from tests, location of permanent pastures, and rotation of crops best suited to our State for dairy herds. Practice work the entire year consists in feeding, milking, care of cattle, and dairy work generally.

The Senior Class has theoretical and practical instruction in tile drainage—everything from reconnoitering the ground to laying the tile. A course in meteorology and its relations to the farm is also given. They have, too, a course of lectures serving as a capstone for the four-year course. These lectures treat of farm economy, plan of work, special farming, diversified farming, growing supplies at home, organizing the farm, arrangement of buildings, location of fields, care of stock, etc., science as applied in feeding, nutritive and manurial value of feed-stuffs, care and use of manures and commercial fertilizers, rotation of crops and renovation of soils. The class has practice work the entire year. This, with a thesis for commencement, completes the course.

A Post-Graduate Course has been provided, and students taking same are given special instruction in studies pertaining to agriculture, and, in addition, regular work on the farm.

The practice work during the four years is not paid for, as it is considered a part of the instruction, but work done voluntarily by the students is paid for at the rate of seven cents per hour. They are encouraged to work as much as possible, and, as the work is done under the supervision of the Professor of Agriculture and the Superintendent of Farm, it is instructive as well as remunerative. Thus, many of them are enabled to pay a great part of their expenses with their own labor. It is a noticeable fact that the boys who work well stand high in their classes. The Experiment Station is always open to students for investigation and instruction.

The equipment of the farm is as follows: Large basement barn, 50 x 72 feet, three stories; first floor occupied by cattle; second story, by horses, machinery, tools, grain-bins, etc.; third story, by hay, which is elevated by Ricker & Montgomery hay carrier. Just outside of the barn there is a seventy-ton circular silo. This is connected with a No. 18 Ohio Standard feed and ensilage cutter. The power for cutter is supplied by an eight-horse-power Skinner engine.

The dairy building is commodious, having two large and

one small room on first floor, besides the cellar. The upper story is occupied by the Agricultural Society, where they meet every Saturday night. The dairy is supplied with separator, Babcock tester, and other implements for running a dairy. The cellar is cemented and has a cemented aqueduct on one side, through which flows 1,800 gallons of water per day, fed by springs from above. This is for ripening cream and water-supply.

The live stock consists of two Percheron mares, two mules, two Jersey cows, seven grades, one Holstein bull and three cows, one Devon bull and three cows, one Brown Swiss bull and two cows, one Aberdeen Angus bull and two cows, one shorthorn bull and two cows, one grade Guernsey cow, one grade Ayrshire cow, three common cows, and seventeen pure-bred Poland-China hogs.

The field crops are corn, cotton, ensilage, stock beets, peas, potatoes, hay, clover, oats, rye, soja beans, grasses, etc.

It is the endeavor of all to make practical farmers of all the agricultural students, and not visionary theorists.

DEPARTMENT OF HORTICULTURE, ARBORICULTURE AND BOTANY.

PROFESSOR MASSEY.

A thorough knowledge of the anatomy of plants and their physiological functions being the basis of all accurate knowledge of Horticulture, special effort will be made to give thorough instruction in these branches. Botany will be mainly studied as a branch of Biology, but Systematic Botany will also receive due attention. It will not be taught by the mere memorizing of dry definitions, but by a practical study of the characteristics of plants upon which classification is founded.

Those who complete the whole course will receive instruc-

tion in all the branches needed by a professional Horticulturist, including greenhouse propagation, forcing of plants, flowers and vegetables under glass, landscape gardening, farm surveying, road-working, the construction of horticultural buildings, and forest improvement.

COURSE OF STUDY.

FRESHMAN YEAR—*Spring Term.*—Elementary study of plant structure with Text-book and explanatory lectures on plant life, and study of natural forms.

SOPHOMORE YEAR.—Practical study of Pomology, with field lectures and practice in budding, pruning, grafting and propagating in open ground; Invertebrate Zoölogy and Entomology; Systematic Botany in Spring Term.

JUNIOR YEAR.— Vegetable Histology with Compound Microscope, Lectures on Physiological Botany, Forestry and Palæontology; Laboratory study of Cryptogams in Spring Term.

SENIOR YEAR —Lectures on Landscape Art, Road-making, Horticultural construction, and commercial culture of vegetables and flowers in open ground and under glass; Practice in greenhouse management and cross-fertilization.

THESIS.—In the Junior year each student will be furnished with a compound microscope and must make a deposit, at the beginning of each year, of three dollars for materials and reagents used, any unexpended balance of which will be refunded at the end of the year. Instruments furnished by the College, but losses and breakage must be made good by student.

In the Freshman and Sophomore years a deposit of fifty cents is required for use of hand magnifier, to be refunded when the glass is returned in good order. Students intending to make Horticulture their profession will be given special opportunities in the Senior year to become experts in greenhouse work and propagation. The College and Station

Greenhouses and Exotic Grapery give particular advantages for this.

POST-GRADUATE COURSE.—The major study for the Master's Degree will be Practical Horticulture in all its branches, with a course of reading under direction of Professor; Minors, Invertebrate Biology and Cryptogamic Botany.

COURSE IN SCIENCE.—Students in the Scientific course will follow the exact line of work as those in the Agricultural course to the end of the Junior year. The Senior year in this course will be devoted to general Biology and Bacteriology. The Laboratory deposit for this year will be $5.

DEPARTMENT OF CHEMISTRY.

PROFESSOR WITHERS.

MR. ASBURY. MR. BIZZELL.

The Chemical Laboratories are supplied with fume closets, evaporating baths, drying chambers, blast lamps and extra tile-covered tables. The tables are of yellow-heart pine, with oak tops. Each student is provided with one large and two small drawers and one cupboard for keeping apparatus. Each working space is provided with gas, distilled water, reagents and a sink. The Laboratory of Quantitative Analysis will accommodate thirty-two students, sixteen of whom may work simultaneously; and the Laboratory of General Chemistry will accommodate fifty-six students, twenty-eight of whom may work simultaneously.

The Chemical Library contains a carefully selected list of standard reference books and chemical journals.

While the ultimate aim of the work is towards the application of the science to Agriculture and Technology, and the preparation of the student for a career as a chemist, yet the fact is fully appreciated that this is most successfully realized

when the work is based on a broad knowledge of the pure science.

The Freshman Class has for its work a brief introduction to General Chemistry and its relations to the air, soil, plant and animal, following the order of Roscoe's Primer and Lupton's Scientific Agriculture.

The Sophomore Class has Inorganic Chemistry (Storer & Lindsay). The common elements and their principal compounds are studied, with some of the fundamental principles of the science. Due attention is given to Stoichiometry.

The class-room work consists of lectures, accompanied by full experiments, and the exhibition of specimens, to which reference is made. Daily recitations are held on the matter of the previous lecture.

In the Laboratory the student repeats for himself, under the eye of the instructor, the experiments performed in the lecture-room, and records the results and his explanation of the changes that have taken place. Cooley's Guide is followed. The latter part of the year is devoted to Qualitative Analysis (Caldwell).

The Junior Class has Agricultural Chemistry (Mayer). Attention is given to a consideration of the atmosphere as a plant-feeder; the mineral and organic constituents of the plant, and their functions; the soil and its relation to the plant; means of improving the soil; the preparation of manures and composts; green manuring; the composition of fodder, and the different means of curing and preserving; animal chemistry; stock feeding; chemistry of butter, of milk, etc. Qualitative Analysis is finished, and also an introductory course in Quantitative Analysis (Caldwell). In the Laboratory courses the student is required to be able not only to make correct separations, but to know the reasons for the changes, reactions involved, etc., and to test this knowledge frequent recitations are held.

The Senior Class studies Organic Chemistry (Remsen), Theoretical Chemistry (Meyer), and Historical Chemistry

(Venable); and in the Laboratory the time is devoted to the analysis of fertilizers, feeding-stuffs, milk, butter, etc.

For Post-Graduate students courses of reading are assigned and the student required to submit papers on the same. Laboratory work is continued along the line of Agricultural and Technical Analysis and Organic Synthesis (Orndoff).

The Berzelius Society meets fortnightly for the discussion of the chemical journals and other chemical subjects.

DEPARTMENT OF PHYSICS.

LIEUT. RICHARD HENDERSON, U. S. NAVY.

Instruction in Elementary Physics is given to the members of the Freshman Class. The recitations are illustrated by full experiments in the Laboratory.

Text-book: Gage's Elements of Physics.

JUNIOR YEAR.

The class instructed in Electricity and Magnetism entire year. Practical problems, requiring full knowledge of text studied, are to be solved and explained by students at each recitation.

Text-books: Thompson's "Elementary Lessons in Electricity and Magnetism;" Day's "Electric Light Arithmetic."

SENIOR YEAR.

This class will study Electrical Engineering and will carry on a progressive course in testing in the Laboratory. The course will include Dynamo Designing, the practical Wiring of Buildings, and the practical Winding and Construction of Armatures and Field Magnets of Dynamos and Motors, Electric Welding and Electro-Metallurgy.

Text-books: Kempe's "Electrical Testing" and Thompson's "Dynamo Electric Machinery."

The college buildings are lighted by electricity, a compound-wound direct-current Multipolar Generator being used for the purpose. The Senior mechanical students have charge of this plant, and do the practical work of running the engine and tending dynamo.

During the coming year, it is hoped, a complete storage battery plant will be added to the equipment of this department.

DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

PROFESSOR RIDDICK. MR. PARK.
MR. PRITCHETT. MR. YARBROUGH.

In this department the aim is to combine the theoretical with the practical in such a manner as to fit the student to do the work of an engineer and designer, of a builder, or of a mechanic, according to his ability and proficiency in the course. From the beginning of the Sophomore year until the end of the course, the time of the student is divided almost equally between intellectual or class-room work and practical work. By class-room work is meant work in those subjects of general education given to the student in all the departments, and also the theoretical discussion and investigation of those subjects that pertain particularly to matters of mechanics and engineering.

The course, as laid out, is intended to give to those who complete it, such a general and broad knowledge of the subject of mechanics and engineering, and such skill in the use of tools and instruments and in the management of machinery, as will enable a graduate to be prepared to enter upon and make a specialty of any line of work pertaining to mechanics or engineering that he may choose.

In addition to his theoretical training, the student is given a most thorough and careful practical training in the use and

care of tools and machinery. He is made a good workman in both iron and wood.

The class-room work in this department will be as follows:

SOPHOMORE YEAR.

Mechanics.—This includes the study of the different methods of transmitting motion and force from one machine, or part of a machine, to another by means of gear-wheels, belts and pulleys and shafting. The students will be taught how to proportion gear-wheels and pulleys in order to obtain certain velocity ratios, and to "lay out" and put up a line of shafting.

As far as possible, this subject will be made clear and plain by explanations in the shop building.

Buildings and Building Materials.—This is lectures upon buildings and structures and the materials which enter into them. The students are taught the names of the different parts and the correct methods of making and fixing each in its relation to the others. They are also taught to make estimates and bills of materials.

JUNIOR YEAR.

Steam and Steam Machinery.—This is a study of engines and boilers, and steam plants in general. A text-book will be used. Work will be done with the engine and boiler. The students will learn to fire the boiler and tend the engine.

Graphic Statics.—The student learns to determine the stresses in framed structures, bridge and roof trusses by the graphic methods.

Surveying.—During the winter the students will confine their attention to a theoretical study of the principles of surveying, and in the spring they will be taken into the field and made to make a practical application of their theoretical knowledge by surveying and laying off land.

Each student will be required to plot and work up his field-notes.

SENIOR YEAR.

Applied Mechanics.—This is the application of the mathematical knowledge of the student to the investigation of the effect of forces upon bodies and structures, and the resistance of engineering materials to stresses of various kinds.

Bridges and Roofs.—The students are here taught the analytical methods of determining the stress of the various members of a roof or a bridge-truss when subjected to varying loads. They are also taught the methods of proportioning the members of a truss so as to resist the stresses with the least expenditure of material.

Lectures.—During the year one hour per week will be devoted to lectures upon the Strength of Materials and Designing, with special attention to the Designing of Structures and Plants for particular purposes; and, if possible, some time will be devoted to Water-works, Sewerage, etc.

FIFTH OR GRADUATE YEAR.

This department offers facilities for one year of post-graduate work in Mechanical Engineering, leading to the degree of M. E. The course is open to our own graduates and those of other institutions with equivalent requirements for graduation. The course of study is to some extent flexible, admitting of slight changes to suit the needs of the individual student. It consists, in general, of a more thorough study of Mechanics of Materials, Mechanics of Machinery, and Machine Design, including designs for shops and power stations; Steam Heating and Ventilating in detail, and the elements of Railway Engineering. Before graduation, each student will be required to prepare a paper containing a critical review of some mechanical construction, or a complete mechanical design.

PRACTICAL WORK IN THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

During the Freshman year the students in both the Agricultural and Mechanical courses work four hours a week in

the carpenter-shop. The work consists of a number of exercises by which the student is taught the use of carpenter's tools. Towards the end of the year's work each student is required to make some article which will test his workmanship and at the same time be useful. Each student is furnished with a set of carpenter's tools, which he is required to keep in order and return to the Professor or his assistant at the end of the year's work.

The work of the Sophomore Class in the forge-shop consists of a number of graded exercises by which the students are taught to work in iron and steel. The students begin by forging simple shapes out of lead, in order that they may acquire skill in the use of the various tools. They are then taught how to build and tend the fire and to heat iron. When they can do this they forge simple shapes out of hot iron. They learn to "bend," to "draw," to make "scarfs" and to weld round or rectangular pieces of iron.

After they have acquired some skill in working with iron, they are taught to work with steel and to temper it, and are given a short course in tool-making.

During the Fall and Winter terms, the Junior Class works ten hours per week at wood-turning and pattern-making. They work with each machine in turn and learn to use all well. They take turns in tending to the machinery, shafting and belting, and are given a course in pattern-making the last part of the year.

The students of the Junior Class take turns in firing and tending to the boiler, and also in tending to the engine. Whenever the class is at work in the shop, one of the students is firing and tending the boiler and another is looking after the engine.

In addition to the regular course of exercises, the students of the Junior Class are called upon to make boxes, cupboards, shelves, drawing-boards, etc., and to do such work as may be necessary for the department or the College.

During the Senior year the students work ten hours a week

in the machine-shop, where, under the supervision of skilled practical machinists, they learn to use the machines and tools ordinarily found in a machine-shop. Here, as in the other shops, the work consists at first of graded exercises, designed to teach, as thoroughly as possible, the use of each machine. When the students have learned to use these machines with a reasonable amount of skill, they are put to work upon some piece of machinery which will be of use to the College.

All work is done from drawings. A drawing of the exercise to be made is hung up in the shop, and each student makes a copy of it, putting on all the necessary dimensions and notes. This copy is then submitted to the instructor, who makes such corrections and alterations as are necessary and then returns it to the student, who proceeds to make the exercise from this drawing without having seen the object that the drawing represents.

When an exercise is given to the class, the instructor explains where and how the work illustrated by that particular exercise is used in practical construction.

DRAWING.

During the Freshman year all the students in the College take a course in drawing. The drawing of this year consists of free-hand sketching, a course in lettering, and the elements of mechanical drawing.

After the Freshman year each student taking the Mechanical Course will have drawing one hour a day, or what will be equivalent to that time. Each student will be taught to make complete and full plans, elevations, sections and details of work and machinery already built and set up. The students will be taught the conventional signs and symbols used in drawing, and all drawings will be marked, lettered and finished as if they were to be used in a regular manufacturing establishment. Students will be required to make tracings of some of their drawings, and from the tracings they

will take blue prints. After the student has entered the Senior Class he will then be required to make drawings of one or more original designs.

As far as possible the work in the drawing-room and in the shop are made to supplement one another. In the shop the students make objects from drawings, and in the drawing-room they for a long time confine their attention to making drawings of objects that already exist.

In this way they will be taught not only to work from and understand drawings, but also to express clearly their own ideas in the conventional language of the draughtsman.

EQUIPMENT.

The equipment of the mechanical department is as follows:

A commodious shop-building, on the first floor of which are the machine-shop, forge-shop, wood-turning shop, carpenter shop and a recitation room. On the second floor are two drawing-rooms, a recitation room and a reading room in which various scientific and technical journals are kept on file.

The machine-shop is equipped with a 25 horse-power Woodbury automatic cut-off engine which furnishes the motive power for the machinery throughout the building, a planer, milling machine, two engine lathes (13″ and 14″), a drill-press and emery wheel; also several vises and sets of tools for doing hand work.

The equipment for the wood-turning shop consists of ten 12-inch swing lathes, one saw and dado machine, one 20-inch pony planer, one mortising and boring machine, one 30-inch hand saw, one 6-inch "sticker," one grindstone, one mitering machine, and four benches equipped with iron vises and all necessary hand tools for pattern-making. Each lathe is equipped with the necessary turning chisels and tools.

The forge-shop is fitted up with twenty-three forges. Each forge is equipped with a water-tank, shovel and poker. For each forge there are provided the following tools: an anvil, hammer, steel square, tongs and hardy. In addition to these,

there will be sledges, swedges, fullers, flatters, and hot chisels for general use in the shop.

The carpenter shop is equipped with thirty carpenter-benches and all the necessary tools for each bench. Each bench is provided with a cross-cut saw, rip-saw, back-saw, try-square, T-bevel, steel square, nail-hammer, mallet, marking gauge, screw-driver, oil-stone, zinc oiler, and a brush for dusting off the bench. These tools stay on the bench, and are used by any student who works at the bench. Only one student works at a bench at any one time.

In addition to the tools named above, each student, upon entering, has issued to him a jack-plane, $\frac{3}{4}$-inch chisel, $\frac{1}{2}$-inch chisel, $\frac{1}{4}$-inch chisel and a slip-stone. These tools are used only by the student to whom they are issued, and he is held responsible for them.

In addition to the shop building, there is a boiler-house equipped with a thirty-horse-power boiler, which furnishes steam to the engine in the machine-shop and also to a small duplex Worthington pump, which supplies water to the various buildings on the grounds.

The drafting-room is furnished with thirty desks, and with each desk there is a T-square, set of instruments, rules and triangles. Each student is furnished a drawing-board.

In addition to the above, the College owns a transit, Y-level, compass, rods, chains, etc., a Thompson's Improved Indicator, Polar Planimeter and other instruments used in illustrating the work of this department.

DEPARTMENT OF MATHEMATICS.

ADJUNCT—PROFESSOR YATES.

It will be the aim of this department to give the young men a thorough and practical knowledge of Pure Mathematics. All students will be required to do as much supplementary work as time will permit, for no principle is well

learned by a pupil and thoroughly fixed in his mind till he can use it.

The course in Mathematics begins in the Freshman year, and is completed by the students in the Mechanical Course at the close of the Winter Term of the Senior year. Agricultural students drop the study of Mathematics after having finished Trigonometry.

FRESHMAN CLASS

During this year it is our purpose to complete Arithmetic and Algebra to quadratic equations. The young men are required to solve the problems by neat and intelligent methods, and are kept free from set rules and formulas.

To enter this class the student must have a thorough knowledge of Arithmetic through fractions.

SOPHOMORE CLASS.

This class completes Algebra during the Fall Term. The Winter and Spring Terms are devoted to plane and solid Geometry, with numerous exercises for original solution.

Every effort is directed to lead students to pursue these studies without feeling that they are characterized by arbitrary laws and mysterious processes; in other words, to work by reason, and not by rules and memory.

During the latter part of the year the class has two recitations a week in Trigonometry additional.

JUNIOR CLASS.

The first part of the year is spent in the completion of Trigonometry, with practical applications. The remainder of the session is devoted to Analytical Geometry.

Much exercise work will be done, since it is only by solving problems which require some degree of original thought that any real mastery of the study can be gained.

SENIOR CLASS.

This class will begin Calculus at the beginning of the session and complete the same by the end of the Winter Term.

ENGLISH DEPARTMENT.

PROFESSOR HILL.

It will be the endeavor of this department to give to each student such a practical familiarity with the English language that he will speak and write his mother tongue with accuracy and with ease, and be an intelligent and appreciative interpreter of its literature. In addition to the regular text-books, standard prose and poetic writers will be critically read and discussed through the whole course.

The department is gradually adding a reference library that will be at all times accessible to students.

The course in English begins in the Freshman year, and continues through the whole four years, and is required of both Agricultural and Mechanical students.

FRESHMAN CLASS.

Four Recitations a Week.

The first part of the year is spent upon a review and drill on the forms and syntactical laws of the language. This work is made as practical as possible. The second half of the year is devoted to the fundamental principles of composition and their application. Constant exercises are required, but, in this year, the student is assisted in his accumulation of material for these exercises, so that his attention may be given almost entirely to correctness of expression.

Text-books: Lockwood's Lessons in English; Strang's Exercises. Parallel for 1895–'96: The Sketch Book, some of the De Coverley Papers.

SOPHOMORE CLASS.

Three Recitations a Week.

The work for this year begins with the History and Development of the English Language. This will be followed by

a course in the elements of Rhetoric. In this course in Rhetoric, special attention will be paid to the analysis of themes and their subsequent elaboration, step by step. Much of this work will be done in the lecture-room, and no pains will be spared in the attempt to develop the student's imaginative and constructive powers.

Text-books: Lounsbury's English Language, Genung's Outlines of Rhetoric. Parallel for 1895–'96: For class-room, selections from De Quincey and Garnett's Prose.

JUNIOR CLASS.

Three Times a Week.

The first part of this year will be spent upon Logic and Logical Praxis. Afterwards the class will take up Higher Rhetoric, Rhetoric as it has to do with Invention. In order to make this study of Invention more fruitful, an analysis of the methods of some of our best writers will be carried along with it.

Text-books: Jevon's Logic, Gregory's Practical Logic, Genung's Rhetoric and Rhetorical Analysis, Lectures. Parallel for 1895–'96: Carlyle's Burns, Studies in Garnett's English Prose from Elizabeth to Victoria, two of Burke's Speeches.

SENIOR CLASS.

Three Times a Week.

Literature, English and American, will occupy the year. Historical periods will first be studied, and then the literature of the periods. Some parts of the year's work will be done topically. The Elizabethan Drama is taken up critically. Parallel for 1895–'96: Thayer's Select Plays will be used in class-work.

Text-books: Fiske's Taine's Literature, Hawthorne and Lemmon's American Literature, Lectures on Poetry, Garnett's and Thayer's Selections, Browne's Versification, Hudson's or Rolfe's editions of Shakespeare.

DEPARTMENT OF BOOKKEEPING.

ADJUNCT—PROFESSOR YATES.

All students in the Sophomore Class will be required to take single-entry bookkeeping during the Spring Term.

The work in the text-books will be supplemented by numerous original examples and sets for practice.

DEPARTMENT OF HISTORY.

PRESIDENT HOLLIDAY.

In this course students are given a familiar knowledge of the history of their own country and State, and an outline of general history, both ancient and modern. They are taught, as far as possible, to note the progress of civilization, the development of constitutions and tendency of political systems rather than to memorize isolated facts—in other words, the chief effort is directed towards teaching students how to read and to think, rather than to recite.

Instructions will be partly by lectures and partly by standard text-books, such as Moore, Stephens, Swinton, Myers, and Green.

Students will also be encouraged and guided in outside readings on special subjects, for which the College Library will afford ample conveniences.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

LIEUT. RICHARD HENDERSON, U. S. NAVY.

All students are required to attend the military drills and lectures.

Each student is required to devote three hours each week to drill.

Battalion drill on Wednesday and Friday afternoons.

Uniforms are required to be worn only on drill, and while on duty as officers-of-the-day, etc.

Target firing during months of May and June.

The Senior and Junior Classes are required to study the Army Drill Regulations and Manual of Guard Mounting. Lectures by the Military Instructor on Camping, Battle Formations, Cover, Firings, etc.

CADET OFFICERS OF BATTALION.

Company A.	*Company B.*	*Company C.*
Capt. C. M. Hughes,	Capt. J. A. Bizzell,	Capt. E. S. Darden,
1st Lt. H. Wiswall, Jr.,	1st Lt. W. K. Davis, Jr.,	1st Lt. L. B. Ennett,
2d Lt. S. C. McKeown.	2d Lt. C. W. Gold.	2d Lt. M. C. Patterson.

Lieut. and Adjutant J. C. Day. Serg't-Major W. H. Harriss.
Lt. and Quartermaster W. A. Bullock. Quartermaster-Serg't V. V. Privott.
Color-Sergeant G. W. Corbett, Jr.

One gray uniform is required. Cost, $16.85.

As a proper protection against cold and rain each student is required to have one gray water proof overcoat (mackintosh), which costs about $5.

LOCATION.

The original College site and farm, in all comprising a tract of about sixty-two acres, were donated by Mr. R. S. Pullen, of Raleigh, to the State of North Carolina for the purposes of industrial education. The gift is a noble one, and the name of the donor will be linked with the history of the College.

Situate on a commanding eminence on the Hillsboro road, one of the principal highways into Raleigh, at a distance of three-fourths of a mile from the corporate limits, the site is, in all respects, a suitable one. The ground slopes from the building in every direction, giving almost perfect drainage, as well as handsome views of the College buildings from every direction.

The water is unusually good and the supply abundant.

A healthy location is one of the absolutely essential prerequisites for such an institution, and the Trustees feel assured that this is secured in the site given by Mr. Pullen.

Indeed, it is a matter of history that Raleigh, N. C., and Aiken, S. C., were chosen by a commission of eminent medical experts during the late war as perhaps the most suitable places for sanitariums in the South.

The farm has been carefully cultivated for about five years, and the land is being brought up mainly by judicious vegetable manuring. Eighteen acres adjoining the College on the west have been purchased, in addition to the original tract, and still more land would be desirable, but cannot at present be purchased, owing to the pressing need of more buildings.

BUILDINGS.

The present building is of North Carolina brick, made and donated by the State Penitentiary by direction of the Legislature of 1887. The granite used is from the Rolesville quarry, in Wake County, and the brownstone from Wadesboro, Anson County.

The building is 170 by 60 feet, part one story and basement, and part three stories and basement.

Every precaution has been taken for good sanitary arrangement. The class-rooms and dormitories are large and well lighted, and the remaining rooms, such as dining-rooms, chapel, reading-rooms, etc., are well arranged.

A carefully planned brick workshop, erected in 1890 and enlarged in 1894, contains a machine-shop, forge-shop, wood-working-shop, carpenter shop, drawing-rooms, class-rooms, office and wash room, and is equipped for thorough work in every particular. We hope to add a foundry during the coming summer.

The dormitory rooms in the second and third stories of the College are well ventilated, wholesome and comfortable, and four substantial brick dormitories have been erected near the

main College building. Others will be added as soon as possible, to supply the constantly increasing demand.

DIVISION OF SESSION.

The session is divided into three terms, designated as the Fall, the Winter and the Spring Term. All students found deficient at Christmas, the close of the Fall Term, will be sent home.

The best time to enter college is at the beginning of the scholastic year, with the Fall Term. Students desiring to enter as late as the Spring Term will find it impossible to pass the necessary examination unless they have already attended similar colleges, and had best wait till the begining of another session.

Any student desiring to enter the Sophomore or other higher class, omitting the earlier classes, will be required to stand such examination as will show ample preparation for such higher classes as he may wish to undertake.

REPORTS.

Reports of scholarship and deportment are sent at the end of each term. In the grading, 100 is the maximum, 90 or over is considered excellent, 80 or over creditable. To pass, the student must make 60. In calculating the average for the term, each subject counts equally.

HONORS.

Students whose average for the three terms is 90 or more will have their names inserted in the catalogue on the honor roll.

On graduation, the student in the course in Agriculture whose average is highest will be awarded first distinction in the course in Agriculture, and the student whose grade is next will be awarded second distinction. In the same way first and second distinctions in the course in Mechanics are awarded.

The students attaining first distinction in the two courses will be given a place on the Commencement stage, together with three others selected by the Faculty.

DEGREES.

Two Baccalaureate degrees will be conferred. Upon those who have successfully passed their examinations in the various schools of the Agricultural course at the end of four years will be conferred the degree of Bachelor of Science. Upon those who, through four years, have done likewise in the Mechanical course the degree of Bachelor of Engineering will be conferred.

To postgraduates who have suecessfully passed examinations after a supplementary year's work the degrees of Master of Science will be given in the Agricultural Department, and the degree of M. E. in the Department of Mechanics. The fee for Baccalaureate Diploma is $3, and for Diploma for M. E., or M. S., $5.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The various Christian denominations are well represented in the student body, and all unite in a Young Men's Christian Association, which meets with regularity and exerts a beneficial influence throughout the College.

LITERARY SOCIETIES.

There are two literary societies in the College—the Pullen and the Leazar—and both are sustained with energy and spirit. They afford abundant opportunity for improvement in declamation, debate, parliamentary law and composition, and students will find in either congenial associations.

TECHNICAL SOCIETIES.

The Agricultural Society, Mechanical Society, and Berzelius (Chemical) Society have been organized by the students taking most interest in these special departments of study. Their work consists in reviews of the various technical journals and in original papers.

LIBRARY.

The Library, like the College itself, is in its infancy, containing about fifteen hundred volumes. It will be steadily increased by the purchase of standard works, and, subject to necessary regulations, students will have free use of the books for general reading and for purposes of reference.

Reference libraries for the use of students have also been placed in the Departments of Agriculture, Horticulture, Chemistry, Mechanics, and English.

LABOR.

On the farm and about the College certain work can be performed by the students. For all such labor, not instructive and a part of the College course, students who perform it will be paid *seven* cents per hour.

PRIZES.

A gold medal of the value of ten dollars will be given to the Freshman student who most distinguishes himself in the agricultural work, and a second medal (or the money value thereof, ten dollars) to the student who, in addition to his class-work, earns most money by his skill in agricultural labor outside, and a third medal (or the money value thereof, five dollars) to the student who, in addition to his class-work, earns the next most money by his skill in agricultural labor outside.

DISCIPLINE.

There must be order and family decorum throughout the College, though the methods of securing both will appeal to the self-respect of the student, rather than to the dread of penalties.

For minor deficiencies or irregularities proportional demerit marks will be noted on the reports sent to parents or guardians at the end of each term, and it is hoped that parents will inquire into the cause of such evidences of demerit and hold their sons to strict account for them, since,

if a student is thoroughly in earnest, it is quite possible for him to pass through his course without incurring one deficiency mark. Some of our students have so passed through four entire sessions.

Students who persist in grave misconduct will not be permitted to remain in the College.

The indolent and vicious are not wanted, will not be tolerated, and had best not attempt to enter where a student must work or leave, as there is no room in our system for idlers.

STUDENTS.

AGE AND QUALIFICATIONS OF APPLICANTS.

Applicants for the Freshman Class must be at least fifteen years of age; must furnish evidence of good moral character and physical development; must understand the forms and laws of their *own language fairly well*, and must be familiar with *arithmetic*, including the practical rules of the same, through fractions, and have a fair knowledge of *Geography* and *State History*. Applicants for the Sophomore Class must pass, in addition, an examination on the studies of the Freshman year.

COUNTY AND PAY STUDENTS.

The law provides for two kinds of students—county and pay. Each county is entitled to as many county students as it has members in the House of Representatives. This class of students is entitled to free tuition and lodging in college dormitories. There is no limit to the number of pay students, and these students will be allowed to lodge in college buildings. The expenses of a pay student are only $30 a year more than those of a county student. Young men desiring to enter as county students must apply to the Board of County Commissioners for such appointments; the College authorities cannot make them.

ADMISSION.

As soon as State county examiners are appointed arrangements will, it is hoped, be made with them to examine, for a small fee, all applicants for admission. This examination will be held at county seats on the first Saturday in August, and will be furnished by the College. But all young men wanting to enter can be examined at the College on the day before its opening. These will be held at the following hours: English, 9 A. M.; Mathematics, 11 A. M.; Geography, 2 P. M.; History, 3:30 P. M.

Examinations for conditional students and for applicants for advanced classes will be held also on these days.

Students, after arriving in Raleigh, must report at once to the President of the College.

Students who have passed the examinations for admission or for advancement to a higher class will report to the Secretary of the Faculty for registration.

GENERAL RULES.

Every young man, on becoming a member of the College, thereby pledges his obedience to the rules, a printed copy of which will be furnished him, and to a diligent performance of his duties.

Students are expected at all times to demean themselves in a quiet, gentlemanly manner, and no student will be allowed to remain in the institution who, by misconduct or indolence, shows himself unworthy of its benefits.

All students will be required to attend morning prayer in the chapel.

On the Sabbath students must attend the churches in Raleigh, subject to regulation of the President and Faculty, whenever service is not held in the College building.

Each occupant of a dormitory will be expected to keep his room, or section of room, in good order and ready for inspection at any time.

CLOTHING, ETC.

Each student is required to have one gray uniform suit, costing $16.85; one gray water-proof, costing not over $5, and one pair of blue cotton overalls, costing about 50 cents. Each student should bring a hair-brush and comb, and, if possible, a change of clothes for rough work on the farm or in the workshop; in any event, a pair of overalls for such work.

TUITION.

The cost of tuition will be $20 per scholastic year, except to county appointees, who are entitled to tuition and lodging *free of cost.*

BOARD AND LODGING.

Board and lodging will be furnished all county students at $8 per month. To all other students who may desire it, and to the extent of our accommodations, board will be furnished at $8 per month and lodging as below stated.

Many students live in messes of their own, and thus reduce their expenses for board to less than $8 per month. Students wishing to live in these messes must file a written request from their parent or guardian.

Each student living in the College must bring with him a change of sheets and pillow-cases, four towels and two counterpanes, plainly marked.

COLLEGE CHARGES PER SESSION.

I. COUNTY STUDENTS.

1.	Tuition free.	
*2.	Board, at $8 per month, per session 9½ months	$ 76 00
3.	Fuel and medical attendance, but not medicine, for entire session	10 00
	Total	$ 86.00

*When the students board at their own messes, their payments for board are not made to the College.

II. FOR OTHER STUDENTS.

1. Tuition per session	$ 20	00
*2. Board, at $8 per month, 9½ months	76	00
3. Fuel and medical attendance, but not medicine, for entire session	10	00
4 For lodging in College building, room, furniture, bedding, etc	10	00
Total	$116	00

Of these charges $13.75 and $16.85 for uniform must be paid upon entering College, and the remainder *in monthly installments, in advance.*

Each student must also deposit, on entering, a contingent fee of $1, of which all not needed to pay for unnecessary damage to property will be returned.

Each student in Chemistry must make good all apparatus, etc., he breaks, and for this purpose must make a deposit at the beginning of the year. These breakages are seldom over fifty cents per year for each hour per week spent in the laboratory.

For deposit in Horticultural laboratory see that department.

All students must furnish their own oil, lamp chimneys, books, stationery, drawing pencils, thumb-tacks, and medicines, and arrangements will be made for them to get these at lowest cost.

*When the students board at their own messes, their payments for board are not made to the College.

TABLE OF STUDIES.

FRESHMAN CLASS—FOR ALL COURSES.

	Fall.	*Winter.*	*Spring.*
Agriculture	--	--	2
Botany	--	2	2
Chemistry	2	--	--
Physiology	2	2	--
Physics	3	2	3
Mathematics	5	5	5
English	4	4	4
History	1	1	1
Physical Laboratory	2	2	2
Agricultural and Horticultural Practice	4	4	4
Shop	4	4	4
Drawing	3	3	3

FOR THE COURSE IN AGRICULTURE.

SOPHOMORE CLASS.

	Fall.	*Winter.*	*Spring.*
Botany	4	--	--
Agriculture	--	2	2
General Chemistry	3	3	3
Mathematics	5	7	7
English	3	3	3
History	1	1	1

JUNIOR CLASS.

Agriculture	3	5	3
Horticulture	2	3	2
Agricultural Chemistry	3	3	3
Mathematics and Surveying	4	--	3
English	3	3	3
History	1	1	1

SENIOR CLASS.

Agriculture	5	5	5
Horticulture	4	4	4
*Org. and Theoret. Chem	3	3	3
English	3	3	3
History	1	1	1

PRACTICE WORK.

Sophomore.		*Junior.*		*Senior.*	
Agr. and Draw.	4	Agr.	4	†Agr.	2
Hortic.	4	Hortic.	4	†Hortic.	4
Chem. Lab.	4	Qual. & Quant. Anal.	6	Agr. Chem. Anal.	8

† Agriculture or Horticulture may be substituted for this.

† Agricultural Chemical Analysis may be substituted for this.

FOR THE COURSE IN MECHANICS.

SOPHOMORE CLASS.

	Fall.	*Winter.*	*Spring.*
Architecture	3	--	--
General Chemistry	3	3	3
Mathematics	5	7	7
English	3	3	3
History	1	1	1

JUNIOR CLASS.

Graphic Statics and Mechanics	2	2	2
Steam and Steam Machinery	4	3	3
Electricity and Magnetism	1	1	1
Mathematics and Surveying	4	5	5
English	3	3	3
History	1	1	1

SENIOR CLASS.

Mechanics of Materials and of Machinery	2	--	2
Roofs and Bridges, and Construction	--	2	2
Machinery of Transmission	--	--	2
Analytical Mechanics	3	3	3
Electrical Engineering	1	1	1
Mathematics	4	4	--
English	3	3	3
History	1	1	1

PRACTICE WORK.

Sophomore.		*Junior.*		*Senior.*	
Chem. Lab.	4	Shop and Survey'g.	10	Shop	10
Shop Work	6	Drawing	5	Drawing	5
Drawing	5			Electrical Testing	2

FOR THE COURSE IN APPLIED SCIENCE.

SOPHOMORE CLASS.

	Fall.	*Winter.*	*Spring.*
Botany	4	--	--
General Chemistry	3	3	3
Mathematics	5	7	7
English	3	3	3
History	1	1	1

JUNIOR CLASS.

Elective	7	8	8
Mathematics	4	3	3
English	3	3	3
History	1	1	1

SENIOR CLASS.

Elective	11	11	11
English	3	3	3
History	1	1	1

PRACTICE WORK.

Sophomore.	*Junior.*	*Senior.*
Chem. Lab. 4	Elective 15	Elective 15
Botany, etc..... 4		
Drawing 5		

CALENDAR.

1895.

Wednesday, January 2, Winter Term begins.
Friday, February 15, Announcement of subjects for theses.
Friday, March 22, Winter Term ends.

Tuesday, March 26, Spring Term begins.
Saturday, May 25, last day for submitting theses.
Friday, May 31, Senior examinations end.
Friday, June 7, examinations end.
Wednesday, June 12, Commencement Day.

August 3, First Saturday, } Examinations for admission at county seats by county examiners.
Tuesday, Sept. 3, Wednesday, Sept. 4, } Examination for admission and for conditioned students.
Thursday, September 5, Registration Day.
Friday, September 6, Fall Term begins.
Thursday, November 28, Thanksgiving Day.
Friday, December 20, Fall Term ends.

1896.

Thursday, January 2, Winter Term begins.
Saturday, February 15, announcement of subjects for theses.
Friday, March 20, Winter Term ends.

Tuesday, March 24, Spring Terms begins.
Saturday, May 23, last day for submitting theses.
Friday, May 29, Senior examinations end.
Friday, June 5, examinations end.
Wednesday, June 10, Commencement Day.