FIFTH ANNUAL CATALOGUE

OF THE

NORTH CAROLINA COLLEGE

OF

AGRICULTURE AND MECHANIC ARTS,

RALEIGH, N. C.

1893-'94.

FALL TERM BEGINS ON SEPTEMBER 6, 1894.

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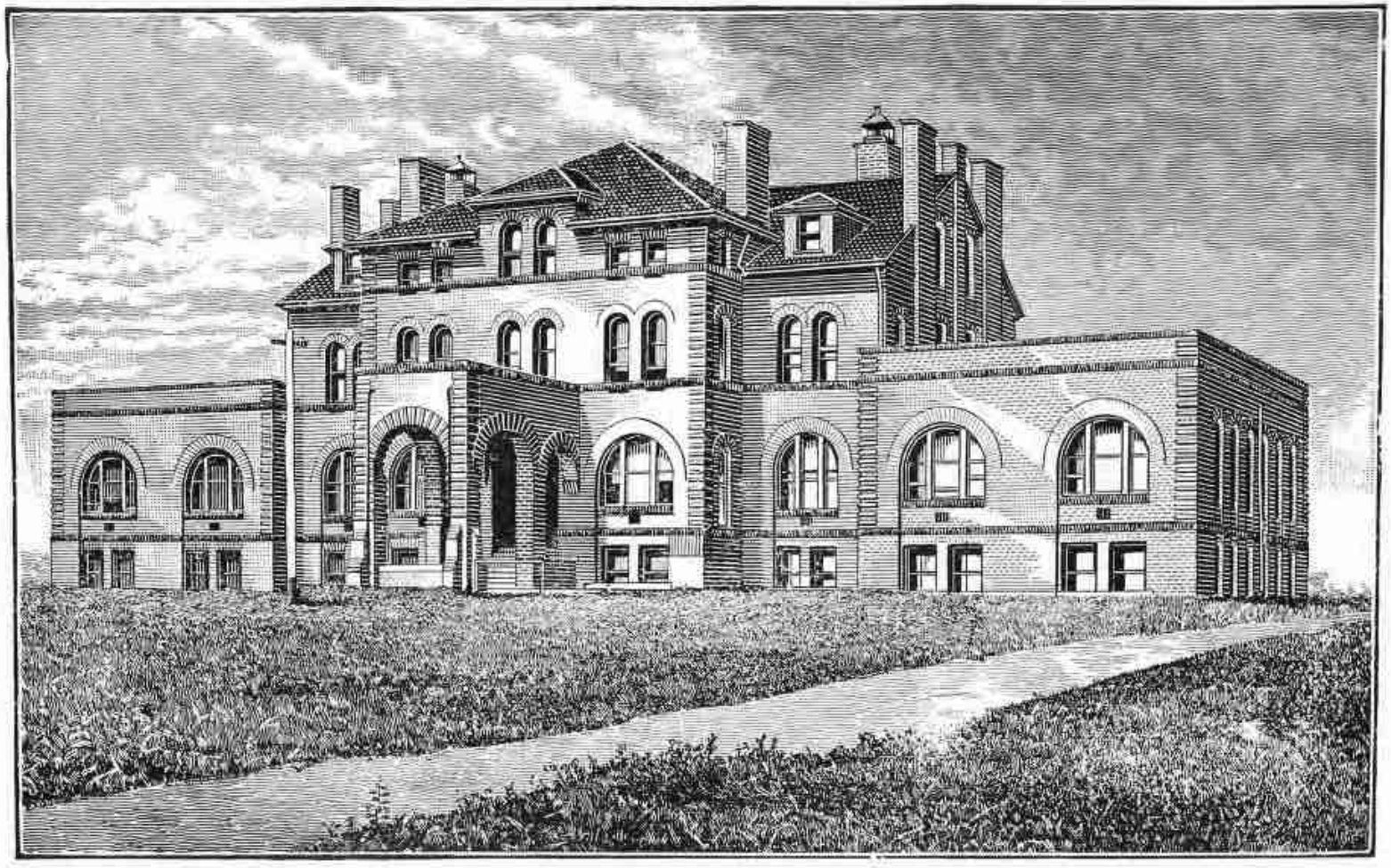

NORTH CAROLINA COLLEGE OF AGRICULTURE AND MECHANIC ARTS. (MAIN BUILDING).

TRUSTEES OF THE COLLEGE.

W. S. Primrose, President of the Board.	Raleigh.
†W. F. Green	Franklinton.
D. A. Tompkins	Charlotte.
†H. E. Fries	Salem.
N. B. Broughton	Raleigh.
†W. R. Williams	Falkland.
†J. B. Coffield	Everett's.
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†J. H. Gilmer	Greensboro.
†J. F. Payne	Alma.
†J. R. McLelland	Mooresville.
†C. D. Smith	Franklin.
R. W. Wharton	Washington.

EXECUTIVE COMMITTEE.

W. S. Primrose, *Chairman.*

W. F. Green, Henry E. Fries,
N. B. Broughton, W. E. Stevens.

FINANCE COMMITTEE.

N. B. Broughton, *Chairman.*

J. B. Coffield, J. H. Gilmer.

† Members of the Board of Agriculture, and elected by the General Assembly. Others are appointed by the Governor and confirmed by the Senate.

FACULTY AND OFFICERS.

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, M. S.,
Professor of Agriculture.

W. C. RIDDICK, A. B., C. E.,
Professor of Mechanics and Applied Mathematics.

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

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

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

CHARLES M. PRITCHETT, B. S.,
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.

*C. B. WILLIAMS, B. S.,
Instructor in Chemistry.

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

L. T. YARBOROUGH, B. E.,
Assistant in Shops.

F. T. MEACHAM, B. S.,
Dairyman.

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

MRS. SUE C. CARROLL,
Matron.

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

*Resigned.

STUDENTS. 192

POSTGRADUATES (6).

Name.	*County.*	*Course.*
ASBURY, SAMUEL ERSON, B. S.	Gaston	Chemistry.
FRANCKS, CHARLES DUFFY, B. E.	Onslow	Mechanics.
HOLLADAY, CHARLES BOLLING, B. E.	Wake	Mechanics.
MEACHAM, FRANK THEOPHILUS, B. S.	Wake	Agriculture.
WILLIAMS, CHARLES BURGESS, B. S.	Camden	Chemistry.
YARBROUGH, LOUIS THOMAS, B. E.	Caswell	Mechanics.

SENIOR CLASS (10).

Name.	*County.*	*Admitted.*
BOYD, PASCAL STRONG	Iredell	1890
CORPENING, CHARLES EDWARD	Caldwell	1890
COX, DAVID, JR	Perquimans	1890
HARGROVE, PEYTON CLIFFORD	Edgecombe	1890
PATTERSON, ROBERT DONNELL	Orange	1890
PEARSON, CHARLES	Polk	1890
ROGERS, ZEBBIE GEORGE	Person	1891
SAUNDERS, JOHN HYER	Pitt	1891
WALTON, BENJAMIN FRANKLIN	Wake	1890
WILSON, JOHN MCCAMY	Mecklenburg	1890

JUNIOR CLASS (25).

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

Name.	*County.*	*Admitted.*
HUNTER, MALCOLM BEALL	Mecklenburg	1891
MCEACHIN, ALBERT DOZIER	Richmond	1891
MCKEOWN, SAMUEL CHRISTOPHER	South Carolina (State)	1891
PATTERSON, MANN CABE	Orange	1890
PRINCE, ABRAM HINMAN	Vance	1891
PRIVOTT, VICTOR VASHTI	Chowan	1891
STAFFORD, FRANK CALDWELL	Cabarrus	1891
WILLIAMS, GEORGE DANIEL	Gates	1891
WISWALL, HOWARD, JR	Beaufort	1891
YARBROUGH, CHARLES GARRETT	Caswell	1891

SOPHOMORE CLASS (31).

Name.	*County.*	*Admitted.*
ALLEN, DANIEL	Wake	1893
BEARD, ROBERT BRUCE	Forsyth	1892
COUNCIL, JOHN TAYLOR	Bladen	1892
CRAWFORD, JAMES SAMUEL	Wayne	1893
FOSCUE, JULIAN MANLY	Jones	1892
FRAPS, GEORGE STRONACH	Wake	1893
GREEN, MARION JACKSON	Rutherford	1892
GRIER, SAMUEL ANDREW	Cabarrus	1892
HARRIS, MCCAMY JAY	Cabarrus	1892
HICKS, JOHN THOMAS	Durham	1892
HOWARD, JOHN	Edgecombe	1892
JACKSON, WILLIAM COLBERT	Pitt	1892
MACRAE, JAMES CHRISTOPHER	Cumberland	1892
MATTHEWS, PAUL VANCE	Halifax	1892
MEWBORNE, ROBERT GRAHAM	Lenoir	1892
MITCHELL, GEORGE LEE	Surry	1892
MOORE, TILON VANCE	Brunswick	1892
SEYMORE, THOMAS HENRY	Franklin	1892
SHAFER, WILLIAM ANTON	Virginia (State)	1892
SMITHWICK, THOMAS JEHU	Bertie	1892
SQUIRES, MARK	Union	1892
STANLEY, PAUL HAMPTON	Wayne	1892
STRONACH, VAN DALEN	Wake	1893
VICK, MARK RODGERS	Northampton	1892
WESSELL, EMIL AUGUST	New Hanover	1892
WHITAKER, JOHN RICHARD, JR	Halifax	1892
WHITTED, LEVI ROMULUS	Alamance	1893
WILLIAMS, HENRY LLOYD	Gates	1892
WILLIAMS, JESSE BURGESS	Camden	1892
WILSON, AMME ANEROL	Gaston	1892
YARBOROUGH, WEBB CHITMOND	Caswell	1892

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FRESHMAN CLASS (73).

Name.	*County.*	*Admitted.*
BAKER, WILLIAM MANLY	Edgecombe	1893
BATTLE, DOSSEY, JR	Edgecombe	1893
BATTLE, EDWARD GRAHAM	Edgecombe	1893
BELVIN, CHARLES HINTON, JR	Wake	1892
BROGDEN, WILLIAM CASTELLA	Wayne	1893
BUFFALOE, JOSEPH SAMUEL	Wake	1893
BURGWYN, HENRY KING	Northampton	1893
CAMERON, DUNCAN HAYWOOD	Wake	1893
CARROLL, JOHN WILLIAM	Wake	1892
CLARK, CHARLES EDWARD	Mecklenburg	1890
COTTEN, PRESTON SIMS	Pitt	1893
COX, ELIJAH LEE	Norfolk, Virginia	1893
DOCK, WILLIAM HENRY	Columbus	1893
EURE, TAZWELL AUGUSTUS	Gates	1893
FARRIOR, HENRY DAVIES	Duplin	1893
FONVILLE, COY	Wake	1893
FURMAN, ROBERT MATHEWSON, JR.	Buncombe	1893
GIBBON, NICHOLAS LOUIS	Mecklenburg	1893
GREEN, MAURICE MARVIN	Wake	1892
GRIFFIN, CHARLES OTIS	Craven	1893
GRIFFITH, CHARLES HELSEBECK	Forsyth	1893
GWYN, RUFUS MCCAWLEY	Caldwell	1893
HARPER, JAMES	Caldwell	1893
HARRIS, CEBERN DODD	Wake	1893
HARVEY, EDWARD LEE	Lenoir	1893
HEARTT, CHARLES DENNIS, JR	Wake	1892
HODGE, JOHN MADISON	Wake	1893
HOPKINS, CHARLES ERVIN	McDowell	1893
INGRAM, EDMOND JERRY	Montgomery	1893
JONES, JOHN ARTHUR	Person	1893
JOYNER, CLARENCE HAYWOOD,	Northampton	1893
JOYNER, THADDEUS OTIS	Northampton	1893
KENDALL, CLYDE BENNETT	Anson	1893
KENNEDY, SIDNEY GUSTAVUS	Lenoir	1893
KIRBY, GEORGE	Sampson	1893
LAMB, FREDERICK CREECY	Pasquotank	1893
LATHAM, HANNIS TAYLOR	Beaufort	1893
LYTCH, ANGUS FERGUSON	Richmond	1893
MATTHEWS, JAMES RICHMOND	Nash	1893
MCCRACKEN, ROBERT PINCKNEY	Haywood	1893
MCGREGOR, JAMES TILLMAN	Anson	1893

Name.	*County.*	*Admitted.*
McLENDON, WALTER JONES	Anson	1893
MEBANE, CHARLES PLEASANT, JR	New Hanover	1893
MERRITT, REPTON HALL	New Hanover	1893
MIDDLETON, FLOYD CARLTON	Duplin	1893
MILLER, STEPHEN HENRY	Duplin	1893
MOORE, ROBE B	Burke	1893
MOSELY, WYLIE THOMAS	Lenoir	1893
OLIVER, ALBERT HICKS	Duplin	1893
PERRY, CHARLES HERMAN	Iredell	1893
PETERSON, GEORGE LANGDON	Sampson	1893
PHILIPS, WILLIAM BURT	Nash	1893
POWELL, THOMAS COX	Wake	1893
PRIMROSE, HUGH WILLIAMS	Wake	1893
RICHARDSON, JAMES WALL	Anson	1893
RIDDLE, SAMUEL MARVIN	Wake	1893
ROBINSON, PERCY PHILIP	Wake	1893
SANDERS, WILLIS HUNTER	Harnett	1893
SCOTT, CHARLES ALEXANDER	Craven	1893
SINCLAIR, JAMES ALEXANDER	McDowell	1893
SKINNER, JAMES LEIGH	Wake	1893
SYME, GEORGE FREDERICK	Wake	1893
THOMAS, LAWRENCE BUTNER	Davidson	1893
TRIGO, JOSE FABIO SANTOS	Havana (Cuba)	1892
WALDO, HARRY	Martin	1893
WALL, TYLER BENNETT	Anson	1893
WATSON, LEA	Wake	1893
WELBORN, WILLIAM FOWLE	Davidson	1893
WEST, THOMAS BLAKE	Wake	1892
WHITAKER, JOEL	Wake	1893
WOOTTEN, BRADLEY JEWETT	New Hanover	1893
WRIGHT, GEORGE ARLINGTON	Robeson	1893
ZOELLER, CHARLES HENRY	Edgecombe	1893

SPECIAL STUDENTS (7).

Name.	*County.*	*Admitted.*
ASHE, THOMAS MARTIN	Wake	1890
CARTER, WILLIAM JOHNSON	Wake	1893
FOY, CLARENCE BENDER	Jones	1889
HUGHES, WILLIAM HENRY, JR	Wake	1893
KING, WILLIAM HENRY	Wake	1893
SMITH, WILLIAM AUGUST	New Hanover	1893
WYNNE, WILLIAM ANDREW	Wake	1893

SUB-FRESHMAN CLASS (40).

Name.	*County.*
ALLEN, CHARLES SKINNER, Jr	Wake.
ARMSTRONG, JOHN BANNERMAN	Pender.
ASBURY, DORSEY FROST	Gaston.
BAGWELL, HARVEY J	Wake.
BASHFORD, ARTHUR LITTLETON	Wake.
BASHFORD, ERNEST NIEFER	Wake.
BATTLE, ROBERT MARRIOTT	Edgecombe.
BROWN, JOHN ROY	McDowell.
BURGIN, JOHN HARVEY	McDowell.
CHURCH, FRANK JUINOR	Vance.
DAVIS, WILLIAM HENRY	Wake.
DEBOY, HENRY GEORGE	Wake.
DOWELL, HORACE ROBERT	Wake.
FORNEY, LEWIS	Rutherford.
FRAZIER, HESKEL NATHANIEL	Columbus.
FURMAN, GEORGE BLACKNALL	Buncombe.
GOODWIN, GEORGE LEE	Wake.
HAWES, JOHN ROBERT	Pender.
HOLLINGSWORTH, EDISON JARVIS	Pender.
JONES, JOHN ROBERT	Caswell.
JORDAN, JOHN COUNCIL	Wake.
LEWIS, AUGUSTUS MARION	Wake.
LOUGEE, ERNEST MCKEE	Wake.
MATTHEWS, JAMES WEBB	Nash.
MCKAY, JOHN HUGH	Richmond.
PICARD, WILLIAM HOWARD	Northampton.
QUINERLY, JOSEPH	Pitt.
SIMPSON, THOMAS SKINNER	Wake.
STEVENSON, EDWARD HAMILTON	Lenoir.
SUTTON, FRED. AMBROSE	Wake.
SWINDELL, JOHN LEAVY	Wake.
TARRY, ALBIN RAWLINS	Mecklenburg (Va.)
TAYLOR, PHILIP HOY	Wake.
TERRELL, THOMAS FULLER	Wake.
WATSON, DAVID FREDERICK	Sampson.
WEAVER, WALTER LUCAS	Northampton.
WHARTON, THOMAS WILLIAM	Wake.
WILSON, OTHO RICHARDSON	Wake.
WORKMAN, FREDERICK	Wake.
WORRELL, WILLIAM JAMES	Wake.

June 14, 1893

First COMMENCEMENT 1893...

ANNUAL ORATION

BY

Hon. HENRY WATTERSON, Louisville, Kentucky.

BACCALAUREATE SERMON

BY

Rev. HENRY W. BATTLE, D.D., Petersburg, Virginia.

. . GRADUATING . CLASS. . .

Name.	*Degree.*	*Post-Office.*
ROBERT WILSON ALLEN	B. E	Poplar Hill.
SAMUEL ERSON ASBURY†	B. S	Gastonia.
HENRY EMIL BONITZ†	B. E	Wilmington.
FRANK FULLER FLOYD	B. E	Wilton.
CHARLES DUFFY FRANCKS*	B. E	Richlands.
EDWARD MOORE GIBBON	B. E	Derita.
GEORGE PENDER GRAY	B. S	Tarboro.
CHARLES BOLLING HOLLADAY	B. E	Raleigh.
WILLIAM MCNEILL LYTCH	B. E	Laurinburg.
WALTER JEROME MATHEWS	B. E	Biltmore.
JAMES WILLIAM MCKOY	B. E	Black Mountain.
FRANK THEOPHILUS MEACHAM	B. S	Raleigh.
CARL DEWITT SELLARS	B. E	Stainback.
CHARLES EDGAR SEYMOUR	B. S	Louisburg.
BUXTON WILLIAMS THORNE	B. E	Airlie.
WILLIAM HARRISON TURNER	B. E	Norwood.
CHARLES BURGESS WILLIAMS*	B. S	Shiloh.
LOUIS THOMAS YARBROUGH	B. E	Semora.
SAMUEL MARVIN YOUNG	B. E	Raleigh.

*With First Distinction in Course.
†With Second Distinction in Course.

HONOR ROLL 1892-'93.

FRESHMAN CLASS.

MARION JACKSON GREEN.

SOPHOMORE CLASS.

HOWARD WISWALL,
WALTER AUSTIN BULLOCK,
JAMES ADRIAN BIZZELL,
SAMUEL CHRISTOPHER MCKEOWN.

JUNIOR CLASS.

CHARLES PEARSON,
ZEBBIE GEORGE ROGERS.

SENIOR CLASS.

SAMUEL ERSON ASBURY,
CHARLES BURGESS WILLIAMS.

FRESHMAN PRIZES IN AGRICULTURE.

Medal, ... LAURENCE JAY RUMPLE.
Ten-Dollar Prize, ... MARION JACKSON GREEN.
Five-Dollar Prize, ... WEBB CHETMOND YARBROUGH.

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 general purpose of this College is so to teach the principles and applications of the sciences, illustrating sound theory by daily practice, as to make out of its students useful and successful men, instead of mere intelligent drones.

"One of the special objects of the College is to foster a higher appreciation of the value and dignity of intelligent labor and the worth and respectability of laboring men. A boy who sees nothing in manual labor but mere brute force despises both the labor and the laborer. With the acquisition of skill in himself comes the ability and willingness to recognize skill in his fellows. When once he appreciates skill in handicraft, he regards the workman with sympathy and respect."

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 trucking 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 graduation.

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 beneath 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.

POSTGRADUATE WORK.

A line of postgraduate work extending through one year will be provided for both of the college courses. In the courses in Agriculture and in Applied Science this postgraduate work will lead to the degree of Master of Science, and in the Mechanical course to the degree of Mechanical Engineer.

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.

SPECIAL WORK.

Special students, otherwise qualified, may be admitted to courses already provided in the College, provided that 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. This class has been found very useful during the session of 1893–'94.

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, three Jersey cows, seven grades, three common cows, and seven pure-bred Poland-China hogs.

The field crops are corn, cotton, ensilage, peas, potatoes, hay, clover, oats, rye, soja beans, 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 instruction 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.

The greenhouse at the College and the greenhouse and glass grapery at the Experiment Station, where exotic grapes are grown under glass, furnish means for practical study and illustration.

COURSE OF STUDY.

FRESHMAN YEAR.

Laboratory study of plant structure; Systematic Botany; Lectures on anatomy and physiology of plants; Practice work in Vegetable Garden.

SOPHOMORE YEAR.

Structural Botany; Pomology, with practice in budding, grafting and greenhouse propagation; Orchard and Vineyard management; Invertebrate Zoölogy and Entomology; Laboratory study of grasses.

JUNIOR YEAR.

Physiological Botany; Vegetable Histology with Compound Microscope; Forestry; Cryptogamic Botany in Spring Term.

SENIOR YEAR.

Palæobotany, with lectures on General Geology and Palæontology; Laboratory study of parasitic fungi; Landscape Gardening, Road-making and Horticultural construction; Commercial Floriculture and winter fencing; Practice in cross fertilization.

In Winter and Spring Terms of Senior year practice work will be largely elective between Botanical and Chemical Laboratory and work in Agriculture, so that the student may have abundant opportunity for doing good original work in the department in which he proposes to make his thesis.

THESIS.

Students making their thesis in this department must select the subject early in the year, with the advice of the Professor.

In the Junior and Senior years 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 Junior and Senior years to become experts in greenhouse work and propagation. The College and Station Greenhouses and Exotic Grapery give particular advantages for this.

POSTGRADUATE COURSE.

The work in this department in postgraduate study for the degree of Master of Science, will consist of general Biological work in Laboratory, and in experimental work in cross fertilization, with a course of reading under the direction of the Professor. Hours by arrangement.

COURSE IN SCIENCE.

Students in the Scientific course will take up Vegetable Histology in the Sophomore year; Cryptogamic Botany, General Biology and Botinology in Junior and Senior years. The same Laboratory deposits will be required as of other students in the same line of work until the Senior year, when the Laboratory deposit will be $5.

DEPARTMENT OF CHEMISTRY.

PROFESSOR WITHERS.

MR. ASBURY.

The Chemical Laboratory is supplied with fume closets, evaporating baths, drying chamber, blast lamp, and extra tile-covered tables, and has accommodations for fifty-six students. The analytical 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, and has three feet of working space. Each working space is provided with gas, distilled water, reagents and a sink.

The Chemical Library contains a carefully selected list of reference books and Chemical Journals.

While the ultimate aim of the work is towards the applications 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 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.

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 (Remsen's Briefer Course). 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 latter part of the year is devoted to a short course in Metallurgy and Applied Chemistry.

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.

The Senior class studies Remsen's Organic Chemistry and Meyer's Outlines of Theoretical Chemistry.

LABORATORY WORK.

In this work while the successfully performing of an experiment or identifying a substance is important, the student is expected to consider the chemical changes involved. To test this knowledge, he is required to record in his notebook the result of his work, his explanation of the changes involved and the reaction.

In the Sophomore year the work is in Inorganic Chemistry (Remsen's Manual) and supplements, the class-room work. The latter part of the year is devoted to Blowpipe Analysis.

The Junior Class has Qualitative Analysis, and the Seniors during the Fall Term Introductory Quantitative Analysis (Caldwell). When the student has become somewhat familiar with the ordinary processes of gravimetric and volumetric analysis, he begins his advanced work in the line of Agricultural or Technical Analysis. An opportunity is also given for Organic Synthesis (Orndorff's Manual).

Postgraduates and elective students will be given advanced work along the lines indicated above.

The Chemical Seminary will meet fortnightly for the discussion of the 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."

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 relations 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 Marine and 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.

The course of work in the Forge Shop for the students in the Agricultural Course is shorter than that for the mechanical students, and is specially laid out for them.

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. During the Winter and Spring terms of last session, the class, in addition to their work on the exercises, built an engine.

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 two-story brick shop-building, on the first floor of which is the machine-shop, 30 x 40 feet; forge-shop, 30 x 40 feet; a recitation-room, 23 x 24 feet, and a wash-room, 10 x 23 feet. On the second floor is the wood-turning shop, 30 x 40 feet; carpenter shop, 30 x 40 feet; drawing-room, 23 x 25 feet, and a small office.

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 of 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 beneh 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 30 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 and Geometry. 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.

In the study of Geometry no efforts are spared to compel students to think and invent new methods and demonstrations.

JUNIOR CLASS.

The work of this class will begin with the study of Trigonometry, followed by Analytical Geometry, which will be completed by the close of the session.

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: Whitney's Grammar, Strang's Exercises, Lockwood's Lessons in English. Parallel for 1894–'95: The Sketch-Book, Scott's Lady of the Lake.

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 1894–'95: For class-room, selections from De Quincy.

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. A short course in Linguistics will also be given.

Text-books: Jevon's Logic, Gregory's Practical Logic, Genung's Rhetoric and Rhetorical Analysis, Lectures. Parallel for 1894–'95: Macaulay's Chatham, Studies in Garnett's English Prose from Elizabeth to Victoria.

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 1894–'95: Jonson's Alchemist, Shakespeare's Merchant of Venice, and Lear will be assigned for 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.

DEPARMENT OF HISTORY.

PRESIDENT HOLLADAY.

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.

Company drills on parade ground after 4:10 P. M. daily; Battalion drill, Inspection and dress parade on Friday at 4 P. M. Target firing during the 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.

Uniforms required: Two gray fatigue suits, which can be obtained at a cost of $7.75 each.

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, two stories high, has been erected and in use since September, 1890. This building contains a machine-shop, forge-shop, woodworking-shop, carpenter shop, class-room, office and wash-room, and is equipped for thorough work in every particular. More shop-room, however, is now imperatively needed for additional forges, pattern-making, etc., and a building 80 feet by 20 feet will be erected and equipped in time for use in September, 1894, in order to accommodate the rapid increase in the number of students.

The dormitory rooms in the second and third stories of the College are well ventilated, wholesome and comfortable, and three 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 beginning 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 successfully passed examinations after a supplementary year's work the degree 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.

A majority of the students are consistent church members, and have united in a Young Men's Christian Association, which meets once each week. Its meetings are well attended, and exert a most beneficial influence.

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.

There is also an Agricultural Society, which is full of life and energy.

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, and Mechanics.

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 must be at least fourteen 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*.

MODE OF ADMISSION.

On the second Thursday in July and September, or such other days as may be decided on by the County Boards of Education, applicants (said applicants to be restricted to the provisions of section 8, chapter 410, Laws of 1887) for admission to the College will present themselves before the County Superintendent of Education, and submit to an examination by written questions which will be prepared and furnished by the President of the College to the said Superintendent, who is requested to make sure that candidates receive no help in their examinations.

The Superintendent will please forward all completed examinations to the President of the College *without delay*, in order that there may be sufficient time for their careful perusal by a committee of the Faculty appointed for that duty. After such perusal the County Superintendent will be promptly informed which papers meet the College requirements, and he, with his Board of Education will, as soon as possible, select their appointees from the successful candidates and issue certificates to as many as their county has members of the House of Representatives. All candidates so chosen will be notified of their appointment, and must present themselves at the College at such time as may be designated by the President.

Entrance examinations will be held also at the College on the two days preceding the opening day, and also on the following Tuesday, and after this at other times by special appointment. 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 to the President of the College at once.

Students who have passed the examinations for admission or for advancement to a higher class will report to the Registrar 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 a room, in good order and ready for inspection at any time.

CLOTHING, ETC.

Each student should bring a bag in which to send washing to the laundry, and must make out washing-lists on blanks which will be furnished by the Matron, who will see that all articles delivered to her will be safely handled and returned. 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.

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

It is understood that none except county students are expected to lodge and board in the College buildings. There not only is no objection, but it may be more convenient and desirable that regular pay students obtain board and lodging outside the College building—such boarding places to be subject to the approval of the Faculty.

COLLEGE CHARGES PER SESSION.

I. COUNTY STUDENTS.

1. Tuition free.	
2. Board, at $8 per month, per session 9½ months	$ 76 00
3. Washing, at 75 cents per month	7 50
4. Fuel and medical attendance, but not medicine, for entire session	10 00
Total	$ 93 50

II. FOR OTHER STUDENTS.

1. Tuition per session	$ 20 00
2. Board, at $8 per month, 9½ months	76 00
3. Washing, at 75 cents, term 10 months	7 50
4. Fuel and medical attendance, but not medicine, for entire session	10 00
5. For lodging in College building, room, furniture, bedding, etc	10 00
Total	$123 50

Of these charges $13.75 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.

TABLE OF STUDIES.

FRESHMAN CLASS—FOR ALL COURSES.

	Fall.	*Winter.*	*Spring.*
Agriculture	--	2	--
Botany	--	--	4
Chemistry	2	--	--
Physiology	2	2	--
Physics	2	2	2
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	4	4	4
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 Shop	4	Agr	4	Agr	4
Hortic	4	Hortic	4	Hortic	4
Chem. Lab	3	Qual. Anal	6	Quant. Anal	8

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	3	Shop and Survey'g	10	Shop	10
Shop Work	7	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	6	6
Mathematics and Surveying	4	5	5
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	3	Elective	15	Elective	15
Botany, etc	7				
Drawing	5				

CALENDAR.

1894.

Tuesday, Jan. 2, Examination of conditioned students.
Wednesday, Jan. 3, Winter Term begins.
Thursday, Feb. 15, Announcement of subjects for theses.
Friday, March 23, Winter Term ends.

Tuesday, March 27, Examination of conditioned students.
Wednesday, March 28, Spring Term begins.
Friday, June 1, Last day for submitting thesis.
Friday, June 8, Senior Examinations end.
Friday, June 15, Examinations end.
Wednesday, June 20, Commencement Day.

Thursday, July 12 } Examination at County Seats by County
Thursday, Sept. 13 } Superintendents.
Tuesday, Sept. 4 } Examinations for admission and for
Wednesday, Sept. 5 } conditioned students.
Thursday, Sept. 6, Registration Day.
Friday, Sept. 7, Fall Term begins.
Thursday, Nov. 29, Thanksgiving day.
Friday, Dec. 21, Fall Term ends.

1895.

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

Wednesday, March 27, Spring Term begins.
Saturday, June 1, Last day for submitting thesis.
Friday, June 7, Senior Examinations end.
Friday, June 14, Examinations end.
Wednesday, June 19, Commencement Day.