EIGHTH ANNUAL CATALOGUE

OF THE

NORTH CAROLINA COLLEGE

OF

AGRICULTURE AND MECHANIC ARTS,

RALEIGH.

1896-1897.

FALL TERM BEGINS THURSDAY, SEPTEMBER 9th, 1897.

WINSTON:
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1897.

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LL. D. 1896, Davidson College; studied at Univ. of Va. and Univ. of Berlin; President of Stonewall Jackson Institute, Va., 1881 '84; President and Professor of English, Florida Agricultural College, 1884–'89.

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

C. E. 1859, Union College, N. Y.; studied also at Washington College, Md., and Dickinson College, Pa.; Examiner Public Schools, Kent county, Md., 1868-'75; Director Department of Agriculture, Miller Manual Training School, Va., 1885-'89.

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

A. B. 1883, and A. M. 1885, Davidson College; post-graduate student Cornell University, N. Y., 1888-'90 (Fellow 1889-'90); Assistant Chemist N. C. Agricultural Experiment Station, 1884 '88; Fellow American Association for Advancement of Science.

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

B. IRBY, M. S., *Professor of Agriculture.*

B. S. 1884, and M. S. 1887, Miss. Agricultural College; Professor of Agriculture, Miss. Agricultural College, 1887-'88; Manager Cycloneta Experiment Farm of Georgia Southern & Florida Railroad, 1888-'92; Fellow American Association for Advancement of Science.

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

A. B. 1885, University of North Carolina; C. E. 1890, Lehigh University, Pa.; recently with Roanoke Navigation and Water Power Company.

NATHANIEL R. CRAIGHILL, S. B., *Professor of Mechanical Engineering.*

S. B. 1893 in Mechanical Engineering, and 1894 in Electrical Engineering, Mass. Institute of Technology; recently with Victoria Cotton Mills, Newburyport, Mass., and Bell Telephone Co. of Philadelphia.

NATHAN HALE BARNES, A. M., Ph. D., *Professor of Physics and Electrical Engineering.*

A. M. and Ph. D., Illinois College; Graduate U. S. Naval Academy and of U. S. Naval Torpedo School; Lieutenant U. S. Navy (retired); Lieutenant-Colonel Florida State Military Institute; formerly Instructor in Military and Natural Sciences, Illinois College, and in Florida State Military Institute.

JOHN C. GRESHAM, CAPT. U. S. ARMY, *Professor of Military Science and Tactics.*

Graduate U. S. Military Academy; Capt. 7th Cavalry U. S. Army; recently Professor of Military Science and Tactics, Va. College of Agriculture and Mechanic Arts.

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

FRANK E. EMERY, M. S., *Assistant Professor of Agriculture.*

B. S. 1883, and M. S. 1893, Maine State College; recently Farm Superintendent of Houghton Farm, N. Y., and of N. Y. Agricultural Experiment Station: Agriculturist N. C. Agricultural Experiment Station.

CHARLES M. PRITCHETT, B. S., M. E., C. E., *Instructor in Drawing and Shop Work.*

B. S. 1891, Georgia School of Technology: M. E. 1895, C. E. 1896, N. C. College of Agriculture and Mechanic Arts.

CHARLES B. PARK, *Superintendent of Shops.*

Recently with Allen & Cram, founders, Raleigh, N. C., and machine shops of Seaboard Air Line Railroad.

B. S. SKINNER, *Farm Superintendent.*

Recently of Perquimans county.

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

B. S. 1895, N. C. College of Agriculture and Mechanic Arts.

DAVID CLARK, B. E., M. E., *Assistant in Drawing and Shops.*

B. E. 1896, M. E. 1895, N. C. College of Agriculture and Mechanic Arts.

A. H. PRINCE, B. S., *Assistant in Dairying.*

B. S. 1895, N. C. College of Agriculture and Mechanic Arts.

C. D. FRANCKS, B. E., *Assistant in English and Mathematics.*

B. E. 1893, N. C. College of Agriculture and Mechanic Arts.

L. R. WHITTED, B. S., *Assistant in Physics and Electricity.*

B. S. 1896, N. C. College of Agriculture and Mechanic Arts.

J. I. BLOUNT, B. E., *Tutor of Sub-Freshman Class.*

B. E. 1895, N. C. College of Agriculture and Mechanic Arts; student of Cornell University, N. Y., 1895-'96.

MRS. SUE. E. CARROLL, *Matron.*

Recently of Sampson county.

JAS. R. ROGERS, M. D., *Physician.*

A. B. 1892, Wake Forest College: M. D. 1896, College of Physicians and Surgeons, Baltimore, M. D.

STUDENTS (247.)

POST-GRADUATES (7).

Name.	*Post Office.*	*County.*	*Major Course.*
JAMES ADRIAN BIZZELL	Dunn	Harnett	Chemistry.
B. S. '95, N. C. College of Agriculture and Mechanic Arts.			
JOHN ISHAM BLOUNT	Faison	Sampson	Civil Eng.
B. E. '95, N. C. College of Agriculture and Mechanic Arts.			
DAVID CLARK	Raleigh	Wake	Civil Eng.
B. E. '95, and M. E. '96, N. C. College of Agriculture and Mechanic Arts.			
GEORGE STRONACH FRAPS	Raleigh	Wake	Chemistry.
B. S. '96, N. C. College of Agriculture and Mechanic Arts.			
CHRIST. MILLER HUGHES	Raleigh	Wake	Chemistry.
B. E. '95, N. C. College of Agriculture and Mechanic Arts.			
ABRAM HINMAN PRINCE	Henderson	Vance	Agriculture.
B. S. '95, N. C. College of Agriculture and Mechanic Arts.			
LEVI ROMULUS WHITTED	Stainback	Alamance	Civil Eng.
B. S. '96, N. C. College of Agriculture and Mechanic Arts.			

CLASS OF 1897—SENIORS (18). 17

Name.	*Post Office.*	*County.*
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JOHN WILLIAM CARROLL	West Raleigh	Wake.
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NICHOLAS LOUIS GIBBON	Derita	Mecklenburg.
CEBERN DODD HARRIS	Raleigh	Wake.
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WALTER JONES MCLENDON, JR.	Wadesboro	Anson.
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ALBERT HICKS OLIVER	Mt. Olive	Wayne.
HUGH WILLIAMS PRIMROSE	Raleigh	Wake.
WILLIS HUNTER SANDERS	Dunn	Harnett.
LEA WATSON	Raleigh	Wake.
BRADLEY JEWETT WOOTTEN	Wilmington	New Hanover.

IRREGULAR.

THOMAS JEHU SMITHWICK	Sans Souci	Bertie.

CLASS OF 1898—JUNIORS (20). 13

Name.	*Post Office.*	*County.*
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ALPHEUS ROUNTREE KENNEDY	Coahoma	Lenoir.
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MOORE PARKER	Raleigh	Wake.
VERNON BADHAM RAMSEUR	Hendersonville	Henderson.
NUMA REID STANSEL	Allenton	Robeson.
TEISAKU SUGISHITA	Kokufu, Hida	Japan.
DALMA OZARK UZZLE	Wilson's Mills	Johnston.

IRREGULAR (7).

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CLASS OF 1899—SOPHOMORES (58). 44

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CHARLES JAY HARRIS	Mebane	Alamance.
KIMBROUGH JONES, JR	Raleigh	Wake.
GERALD O'KEEFE KENDRICK	Raleigh	Wake.
FRANK BANKS KUYKENDAL	Davenport	Mecklenburg.
FLOY LAMBE	Durham	Durham.

Name.	*Post Office.*	*County.*
FRED. HENRY LEMLY	Salem	Forsyth.
ALBERT SIDNEY LYON	Wilton	Granville.
EDWARD HERBERT MADDREY	Seaboard	Northampton.
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O'KELLY WILLIAM MYERS	Washington	Beaufort.
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DAVID EMSLEY PATTERSON	Durham	Durham.
EUGENE GRAY PERSON	Louisburg	Franklin.
ARCHIE WILLIE RAILEY	Lotta	Hertford.
SAMUEL ELI RICHARDSON	Waxhaw	Union.
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FREDERICK ERASTUS SLOAN	Statesville	Iredell.
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JOSEPH MCKEEHAN TULL	Morganton	Burke.
DARIUS SAMUEL WAITT	Raleigh	Wake.
HUGH WARE	King's Mountain	Cleveland.
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CLAUD BURGESS WILLIAMS	Elizabeth City	Pasquotank.
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HUBERT BURNETTE YOUNG	Raleigh	Wake.

IRREGULAR (14).

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FRANK EMIL LOWENSTEIN	Statesville	Iredell.
JACOB RANKIN PARKS, JR	Cope	Randolph.
FRANK NEWCOMB PINNER	Southport	Brunswick.
ANDREW THOMAS SMITH	Oxford	Granville.
JAMES SPENCER SPAINHOUR	Lenoir	Caldwell.
ALEXIS PRESTON STEELE	Statesville	Iredell.
NORRIS F. STEELE	Turnersburg	Iredell.
GEORGE CLIFFORD UZZLE	Wilson's Mills	Johnston.
SILAS MCBEE WETMORE	Lincolnton	Lincoln.
JOSEPH D. WOODLEY	Creswell	Washington.

CLASS OF 1900—FRESHMEN (116). 97

Name.	*Post Office.*	*County.*
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WILL RALPH ABERNETHY	Newton	Catawba.
KEMP ALEXANDER	Harrisburg	Cabarrus.
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PETER ANDERSON	Campinos	Brazil.
WM. MEBANE ATWATER	Rialto	Chatham.
LESLIE GRAHAM BERRY	Washington	Beaufort.
RICHARD BETTIS BOGER	Morganton	Burke.
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JAMES ALEXANDER BROWN	Huntersville	Mecklenburg.
CARNEY JOHN BRYAN	Washington	Beaufort.
FRED. OUTLAW HEND'RS'N BRYAN	Raleigh	Wake.
JAMES HARRY BUNN	Henderson	Vance.
AARON HEADEN BYNUM	Pittsboro	Chatham.
COLIN CAMPBELL	Newton	Catawba.
JOHN WILLIAM CARROLL	Cherryville	Gaston.
EDISON BLACK COUNCIL	Council Station	Bladen.
LLOYD CONRAD DAVIS	Falling Creek	Lenoir.
MARION STUART DAVIS	Louisburg	Franklin.
EDWIN STANHOPE DUNN	Neuse	Wake.
DUNCAN MOORE FAISON	Raleigh	Wake.
HENRY FERGUSON	Neuse	Wake.
HARRIS AUGUSTUS FETNER	Raleigh	Wake.
BRANTLEY HILLYARD FINCH	Lexington	Davidson.
GORDON MICKEL FINGER	Charlotte	Mecklenburg.
FRANK GARVIN	Newton	Catawba.
DENTON GIBBS	Middleton	Hyde.
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JAMES TERRELL GREEN	Pea Ridge	Polk.
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JAMES BAKER HALL, JR	Scotland Neck	Halifax.
SAMUEL MERRILL HANFF	Raleigh	Wake.
GEORGE ROLAND HARRELL	Kelford	Bertie.
MARION MORGAN HARRIS	Fairfield	Hyde.
CHARLES LEWIS HARTLEY	Kendall	Wilkes.
CHARLES GARRETT HARRISON	Medoc	Halifax.
JULIAN HESTER	Creedmore	Granville.
JAMES REECE HILL	Clio	Iredell.
WILLIAM THEOPHILUS HINTON	Greensboro	Guilford.

Name.	*Post Office.*	*County.*
LOUIS CALVIN HOLMAN	Raleigh	Wake.
ALBERT BOYD HOMESLEY	Charlotte	Mecklenberg.
LYNN HOWLAND	Hillsboro	Orange.
HENRY ALLEN HUGGINS	Wilmington	New Hanover.
PHILIP BARBEE HUTCHINS	Chapel Hill	Durham.
JOHN ALFRED IRELAND	Burlington	Alamance.
HAMNER CARSON IRWIN, JR	Charlotte	Mecklenburg.
DANIEL RUSSELL JOHNSON	Town Creek	Brunswick.
JOSEPH BINGHAM KINSEY	La Grange	Lenoir.
ROBERT GRAHAM KNOX	Cleveland	Rowan.
JOHN WOLFE KUYKENDAL	Davenport	Mecklenburg.
ROBERT LEE LUMSDEN	Raleigh	Wake.
MALCOM PURCELL MCLEAN	Maxton	Robeson.
ISAIAH MCPHAIL, JR	Clinton	Sampson.
CORNELIUS MAGLENN	Raleigh	Wake.
LOUIS HENRY MANN	Middleton	Hyde.
HAYWOOD MERRITT	Pittsboro	Chatham.
HENRY HARRISON MILTON	Albemarle	Stanly.
FRED EARL MITCHELL	Raleigh	Wake.
CHARLES ERNEST MOORE	Charlotte	Mecklenburg.
CHARLES ELBERT MOORE	Moyton	Wilson.
ROBERT HALL MORRISON	Mariposa	Lincoln.
GERALD BRUCE NEWBY	Hertford	Perquimans.
JOHN ERNEST NIEMYER	Raleigh	Wake.
FREDERICK GASKILL PARKER	New London	Stanly.
WILLIAM LEAK PEACE	Oxford	Granville.
DANIEL ALLEN POOL	Wadeville	Montgomery.
JUNIUS EDWARD PORTER	Emerson	Bladen.
JOHN RUSSELL POWELL	Hibritten	Caldwell.
JOSEPH OREGON RENN	Durham	Durham.
ALEXIS ROBESON	Tar Heel	Bladen.
WILLIAM EDWIN ROSE	Statesville	Iredell.
ROBERT MEEKER SANDERS	Charlotte	Mecklenburg.
IRA OBED SCHAUB	Culler	Stokes.
JOSEPH WILLIAM SCULL	Windsor	Bertie.
WASHINGTON IRVING SHAW, JR	Gravel Hill	Bladen.
WILLIAM HOLDEN SHERWOOD	Raleigh	Wake.
JOHN WADE SHORE	Boonville	Yadkin.
LEWIS COTTEN SKINNER	Greenville	Pitt.
HENRY JUDSON SMITH	Itam	Rutherford.
ZEBULON VANCE SNIPES	Granthams	Wayne.
JAKE STIREWALT	Statesville	Iredell.
JOHN WESLEY STROUP	Waco	Cleveland.
GEORGE EDWARD SUTTON	La Grange	Lenoir.

Name.	*Post Office.*	*County.*
HILARY EMORY SYKES	Rock Spring	Orange.
THOMAS ALBERT UZZELL	La Grange	Lenoir.
JOHN THOMAS TALTON	Smithfield	Johnston.
WALKER COUNCIL VICK	Council Station	Bladen.
FLETCHER HARDEN WAGSTAFF	Olive Hill	Person.
ROSCOE MARVIN WAGSTAFF	Olive Hill	Person.
RALPH LAMAR WEBB	Shelby	Cleveland.
DAVID EVANS WHARTON	Washington	Beaufort.
GAITHER HALL WHITING	Raleigh	Wake.
WILLIE EDGAR WILLIAMS	Reidsville	Rockingham.
EDWARD WOOD, JR	Edenton	Chowan.
EDWIN FULLER WYATT	Durham	Durham.
HENRY ELIAS WYATT	Raleigh	Wake.

IRREGULAR (19).

WASHINGTON E. BATEMAN	Columbia	Tyrrell.
ZEBULON VANCE BLOUNT	Faison	Sampson.
SAMUEL YOUNG BRYSON	Hendersonville	Henderson.
PAUL COLLINS	Raleigh	Wake.
SAM. B. CRUMP	Jerusalem	Davie.
JOHN ENOCH DOUTHIT	Bower	Forsyth
HENRY ABRAM HOWELL	Gatesville	Gates.
RUFUS WALTER KING [JR]	Raleigh	Wake.
J. COOPER STEADMAN LUMSDEN	Raleigh	Wake.
THOMAS MARSHALL MCCOY	Bristow	Mecklenburg.
MARCUS CLIFTON PEARCE	La Grange	Lenoir.
LEWIS WOOD PHYSIOC	Raleigh	Wake.
CHARLES SYLVANUS SHUFORD	Calhoun	Transylvania.
EDWARD GARDNER SMITH	Garden City	LongIsl'dN.Y.
WM. NATHAN HAROLD SMITH	Raleigh	Wake.
ROBERT LEACH TAYLOR	Leachburg	Johnston.
NUMA FLETCHER TURNER	Banks	Wake.
JOHN DAVID WHITFORD, JR	Newbern	Craven.
ADOLPHUS HILL YEARBY	Durham	Durham.

SUB-FRESHMAN CLASS (28).

Name.	*Post Office.*	*County.*
DANIEL EDWARD ABERNETHY	Newton	Catawba.
WADE RUFFIN BROOKS	Black Creek	Wilson.
WM. MCDOWELL BURGIN, JR	Marion	McDowell.

Name.	*Post Office.*	*County.*
JOHN ROBERT BYRD	Barclaysville	Harnett.
WM. EDWARD CANNADY	Wilton	Granville.
ALEXANDER LILINGTON CLARK	Weldon	Halifax.
WM. PESCUD CRAIG	Marion	McDowell.
DAVID GRIER DELLINGER	Cherryville	Gaston.
DAVID IRA FORT, JR	Raleigh	Wake.
OTTO WILLIAM GENAUST	Wilmington	New Hanover.
EARLE MCKEE GOODWIN	Method	Wake.
WADE HAMPTON GRANT	Snead's Ferry	Onslow.
HENRY BENJAMIN HARDY, JR	Raleigh	Wake.
ROBERT EMMETT HOUSTON	Greenville, S. C.	
SAMUEL CABE JOHNSTON	Chapel Hill	Orange.
LEWIS OMER LOUGEE	Raleigh	Wake.
SAMUEL ALFORD MCANALLY	Red Shoals	Stokes.
CHARLES ERNEST MOORE	Wilson	Wilson.
JOHN LARMOUR PARROTT	Kinston	Lenoir.
JOHN PEARCE, JR	Pollocksville	Jones.
SIMMONS WHITAKER SEBRELL	Wilmington	New Hanover.
FRANK PATILLO SMITH	Guilford College	Guilford.
WM. SIDNEY SMETHURST	Raleigh	Wake.
EDWIN FEREBEE TILLERY	Halifax	Halifax.
DAVID AUGUSTUS WATFORD	Coleraine	Bertie.
JAMES WILCOX	Elizabeth City	Pasquotank.
JOE EMERSON WINSTEAD	Wilmington	New Hanover.
ROBERT WEBB WYNNE	Raleigh	Wake.

COMMENCEMENT 1896.

BACCALAUREATE SERMON

BY

THE REV. A. D. THAELLER, SALEM, N. C.

ANNUAL ADDRESS

BY

PREST. CHAS. D. McIVER, LL. D., NORMAL AND INDUSTRIAL COLLEGE, GREENSBORO, N. C.

GRADUATES AND SUBJECTS OF THESES.

Name.	*Postoffice.*	*County.*	*Course.*

With the degree of Bachelor of Science (B. S.).

*DANIEL ALLEN.....Raleigh.....Wake.....Agr'lture.
The use of glass in Plant Forcing.

*GEO. STRONACH FRAPS.....Raleigh.....Wake.....Science.
The action of Phosphorus trichloride upon an Ethereal Solution of Hydrogen Peroxide.

MARION JACKSON GREEN.....Bostic.....Rutherford...Eng'g.
Design of a System of Sewerage for the College and surrounding community.

†JOHN HOWARD.....Tarboro.....Edgecombe..Eng'g.
Design of a two-pole Series Dynamo.

†WM. COLBERT JACKSON.....Winterville..Pitt.....Agr'lture.
How to drain the soil of surplus water, and at the same time store up a normal supply for future use.

†ROB'T GRAH'M MEWBORNE..Kinston.....Lenoir.....Science.
The determination of Sulphur in Pyrites.

*LEVI ROMULUS WHITTED....Stainback.....Alamance.....Eng'g.
Design of a Steam Engine.

HENRY LLOYD WILLIAMS.....Willeyton.....Gates.....Eng'g.
Design of a two-pole Series Dynamo.

With the degree of Master of Science (M. S.).

SAM'L ERSON ASBURY, B. S..Gastonia.....Gaston.....Chemistry.
The chemical changes occurring in silage during fermentation.

Name.	*Postoffice.*	*County.*	*Course.*
CHAS. BURGESS WILLIAMS	Indiantown	Camden	Chemistry.

Estimation of phosphoric acid in soil by double precipitation with molybdic solution and titration of the ammonium phospho-mloybdate, with standard alkali.

With the degree of Mechanical Engineer (M. E.)

DAVID CLARK, B. E.	Raleigh	Wake	Mech. Eng.

Design of a tandem compound engine.

WILLIAM HENRY HARRISS	Warrenton	Warren	Mech. Eng.

Design of a tandem compound engine.

With the degree of Civil Engineer (C. E.).

C. M. PRITCHETT, B. S. M. E.	Cartersville	Georgia	Civil Eng.

A topographical map of the college campus.

MEMBERS OF GRADUATING CLASS ENTITLED TO SPECIAL MENTION.

DANIEL ALLEN, Agriculture, Horticulture, Chemistry.

GEORGE STRONACH FRAPS, Chemistry, Agriculture, Horticulture, English, History, Mathematics, Physics.

WILLIAM COLBERT JACKSON, Agriculture, Horticulture.

ROBERT GRAHAM MEWBORNE, Chemistry, Agriculture, Horticulture, English, Physics.

LEVI ROMULUS WHITTED, Engineering, Mathematics, Physics.

HONOR ROLL 1895–'96.

SENIOR CLASS.

Name.	*Post Office.*	*County.*
GEORGE STRONACH FRAPS	Raleigh	Wake.
ROBERT GRAHAM MEWBORNE	Kinston	Lenoir.
DANIEL ALLEN	Raleigh	Wake.
WILLIAM COLBERT JACKSON	Winterville	Pitt.

JUNIOR CLASS.

SIDNEY GUSTAVUS KENNEDY	Coahoma	Lenoir.

SOPHOMORE CLASS.

HUGH MCCOLLUM CURRAN	Westboro	Mass.
NUMA REID STANSEL	Allenton	Robeson.

*With first distinction in course.
†With second distinction in course.

ORGANIZATION AND AIMS OF THE COLLEGE.

This College was founded under Act of the General Assembly of March, 1887, and was first opened for students October 2, 1889. Since that time its growth, both in number of its faculty and in number of its students, has been steady, and its work has been thorough and devoted entirely to technical education.

The establishment of a technical college in this State was due to the growth of the conviction that educated men are necessary—not only for the furtherance of the purely intellectual phases of a State's life, but that they are equally necessary for the development of the material resources of a State. It was felt that any State as rich in agriculture and mechanical resources as North Carolina is could not longer afford to fail to train men competent to get the best return from varied soils, or to direct the mechanical industries necessary to use up soil or mineral products. It was believed that the increasing sharpness of competition demanded a more intelligent body of truckers and farmers and better methods of farming.

It was also believed that it was poor economy in a State to have to send from without its borders for skilled artisans, for architects, for builders, for superintendents of machinery, for agricultural, analytical and industrial chemists, for civil, for mechanical, for electrical engineers, when it could educate its own sons for these useful and remunerative employments.

The mission of the College then is, so far as it may be able, to supply to the State these men—men so prepared that they may become leaders in the industrial and scientific life of the Commonwealth. The agricultural department will graduate men who have made a careful study of agricultural and horticultural methods, of soils, of plant

food and growth, of fertilizers, of dairying and stock-raising, of drainage, of vineyard and orchard culture—in short, the department will try to send out, not agricultural theorists nor so-called "book-farmers," but young men who have, by practice in best methods and with best machinery and by study under experienced teachers, attempted to prepare themselves for intelligent and successful farming.

The mechanical, electrical and engineering departments will endeavor to give students a general knowledge of mechanism, of building, of bridge-building, of designing, of dynamos and dynamo running—in fact, of all the work expected of the civil and mechanical graduates of first-class technical institutions.

The College, however, does not intend to make mere machines of its matriculates, but its aim is to make educated men at the same time that it makes educated specialists. To this end general courses of study, similar to those taken in other Colleges, complement the technical work. These include mathematics, book-keeping, history, physics, chemistry, botany, logic, English language and literature, and all students are required to take these studies.

INCOME.

While the State makes the College an annual appropriation, its main support is derived 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 agriculture 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 professions in life."

COURSES OF INSTRUCTION.

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

In the Freshman year, the work of all students in these courses is the same, and consists of Mathematics, English History, Physics, Chemistry, Physiology, Botany and Agriculture in the class-room, and practice work in the field, green-house, 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 includes work in the departments of Agriculture, Horticulture and Chemistry.

Students can make their graduating thesis in any one of the three departments.

Inasmuch as this is not a manual labor training school, we do not propose to educate a young man to be *simply* a farm laborer, but try to give him, in addition to his practical work, a higher training that will fit him for a life of more extended usefulness.

Of course they are imbued with the idea that the man, after all, dignifies the labor, and that the honor of doing anything consists in doing it well.

The manual labor required is termed *practice work*, and

is given in connection with the class-room work. In the lecture-room they learn the *why*, and in the field they learn the *how*.

It is the endeavor at all times to teach the students to use their brains as well as their hands, and that unless the muscle is directed by an educated brain it cannot accomplish the greatest good possible.

THE COURSE IN ENGINEERING.

The aim of this course is to equip the student with such training in pure and applied mathematics as is necessary to enable him to deal with engineering problems from the most favorable standpoint, and also to make of him a good draughtsman and mechanic. It attempts by instruction, both theoretical and practical, to familiarize him with the best engineering and shop practice The more strictly professional work begins with the second year, and is continued throughout the course.

The technical work is included in the departments of Mechanical and Civil Engineering, Physics and Industrial Chemistry, in any of which the student may take his thesis for graduation.

An examination of the schedule of topics, at the end of the Catalogue, will give a clear idea of the subjects taught and the methods employed.

THE COURSE IN SCIENCE.

The work of this course, outside the general studies which are required, is largely elective. The subjects are included under the departments of Entomology, Zoölogy, Botany, Agricultural and Analytical Chemistry, Physics, Electrical Engineering, Applied Mathematics, etc., and the course is intended for those wishing to become specialists in any of these departments. The thesis is to be made in the department in which the student elects most of his studies. The

full time given to practice work in the other courses is required in this.

POST-GRADUATE COURSES.

Post-graduate courses have been established, leading to the degrees of Master of Science (M. S.), Mechanical Engineer (M. E.), and Civil Engineer (C. E.)

Candidates for the Master's degree may take their major subject in the departments of Agriculture, Horticulture, Chemistry or Physics. Minor courses are offered in Agricultural Analysis, Organic Synthesis, Theoretical Chemistry, Vertebrate Zoölogy, Veterniary Science, Cryptoganic Botany, Invertebrate Zoölogy, and Electrical Engineering, two of which must be taken.

For the degrees of M. E. and C. E., the courses are prescribed, and further information will be found under these departments and at the end of the Catalogue.

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

The studies will be carefully adapted to the expansion and development of the special lines of work 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.

COLLEGE BARN.

DEPARTMENTS OF INSTRUCTION.

DEPARTMENT OF AGRICULTURE.

PROF. IRBY.
ASST. PROF. EMERY. MR. SKINNER.

In this department we try to qualify the student so that, when he returns home, he will be capable of managing his own farm, or acting as superintendent, dairyman or stockman for some one else, in addition to being able to perform in person the various kinds of work on a farm. We teach that it is of prime importance to know the reason for everything that is done, and that every *effect* has a *cause*.

COURSE OF STUDY.

FRESHMAN YEAR.

Fall Term—Three months in Hutchinson's Physiology.

Winter Term—Physiology continued and lectures in Hygiene and Comparative Anatomy.

These subjects are amplified by charts and practical illustrations.

Spring Term—Three months in Gulley's "First Lessons in Agriculture."

SOPHOMORE YEAR.

Fall Term—Lectures on Hygiene of the Farm, Drainage, Description and Use of Farm Implements, Cultivation and Harvesting of Farm Crops.

Winter Term—Breeds of Live Stock, including Horses, Cattle, Sheep and Swine.

Spring Term—Tile-Drainage, course of lectures on Preparation of Soils and Cultivation and Harvesting of Crops.

Practice work the entire year.

JUNIOR YEAR.

Fall Term—Dairying, which includes lectures on Selection of Dairy Herds, Development of Cows, Calculation of Feed Rations, Milking, Ripening of Cream, Use of Separator, Churning, etc., Keeping Record and Test of Cattle, Calculation of Milk Values from Tests, Location of Permanent Pastures, and Crops Best Suited to our State for Dairy Herds.

Winter Term—"Zoölogy, and Veterinary Science."

Spring Term—Lectures in Dairying, continued, and Bacteriology.

Practice work through the year is confined to care and handling of stock, and practical dairy work.

SENIOR YEAR.

Fall Term—Davis' "Meteorology."

Winter Term—French's "Tile Drainage," completed; and Mile's stock breeding, introduced.

Spring Term—Lectures on farm topics that are specially important are given, such as Farm Economy, Plan of Work, Growing Supplies at Home, Organizing a Farm. Arrangement of Buildings, Location of Fields, Care of Stock, Science as Applied in Feeding, Nutritive and Manurial Values of Feed Stuffs, Care and Use of Manures, Improvement of Exhausted Soils by Rotation of Crops and by Growing Renovating Crops.

The class has general practice work the entire year; this, with a graduating thesis for commencement, completes the regular four years' course.

Owing to the fact that many young men in the State have not the time or money to enable them to take the full course, and yet desire instruction, we encourage them to come and take a short course in Agriculture during the months of January and February. In this course they would not take any other College studies, unless desired.

A Post-Graduate course has been provided, and students taking the same are given special instruction in studies pertaining to Agriculture, in addition to practical work.

The *practice* work given during the four year's course 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 whenever it can be given; and, as the work is done under the supervision of the Professor of Agriculture and the Superintendent of the Farm, it is instructive as well as remunerative. Thus many of them are enabled to pay a part of their expenses with their labor. Those who work well generally stand well in their classes.

The Experiment Station is near by, and as it is always open for inspection, is another source of practical information for the thoughtful student.

The equipment of the farm is as follows: Large basement barn, 50x72 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 a Ricker & Montgomery hay carrier. Just outside the barn are two seventy-ton circular silos. These are connected with a No. 18 Ohio Standard Feed and Ensilage Cutter. The power for cutting is supplied by an eight horse-power Skinner engine. The dairy building is large and commodious, having three rooms and a cellar, besides a large room above, used as an Agricultural Society hall, in which the Society meets every Saturday night. The dairy is supplied with a De Laval Separator, Babcock Tester, rectangular churn, butter worker, good, cheap heating apparatus, etc. The cellar is cemented, and has a cemented aqueduct on one side, through which flows water from a spring situated above the dairy. This is for ripening cream, and water supply.

The live stock consists of two Percheron mares, two mules, pure-bred Jerseys, Holsteins, Brown Swiss, and high-

grades. Poland-China hogs are raised to utilize the waste from mess-hall and dairy.

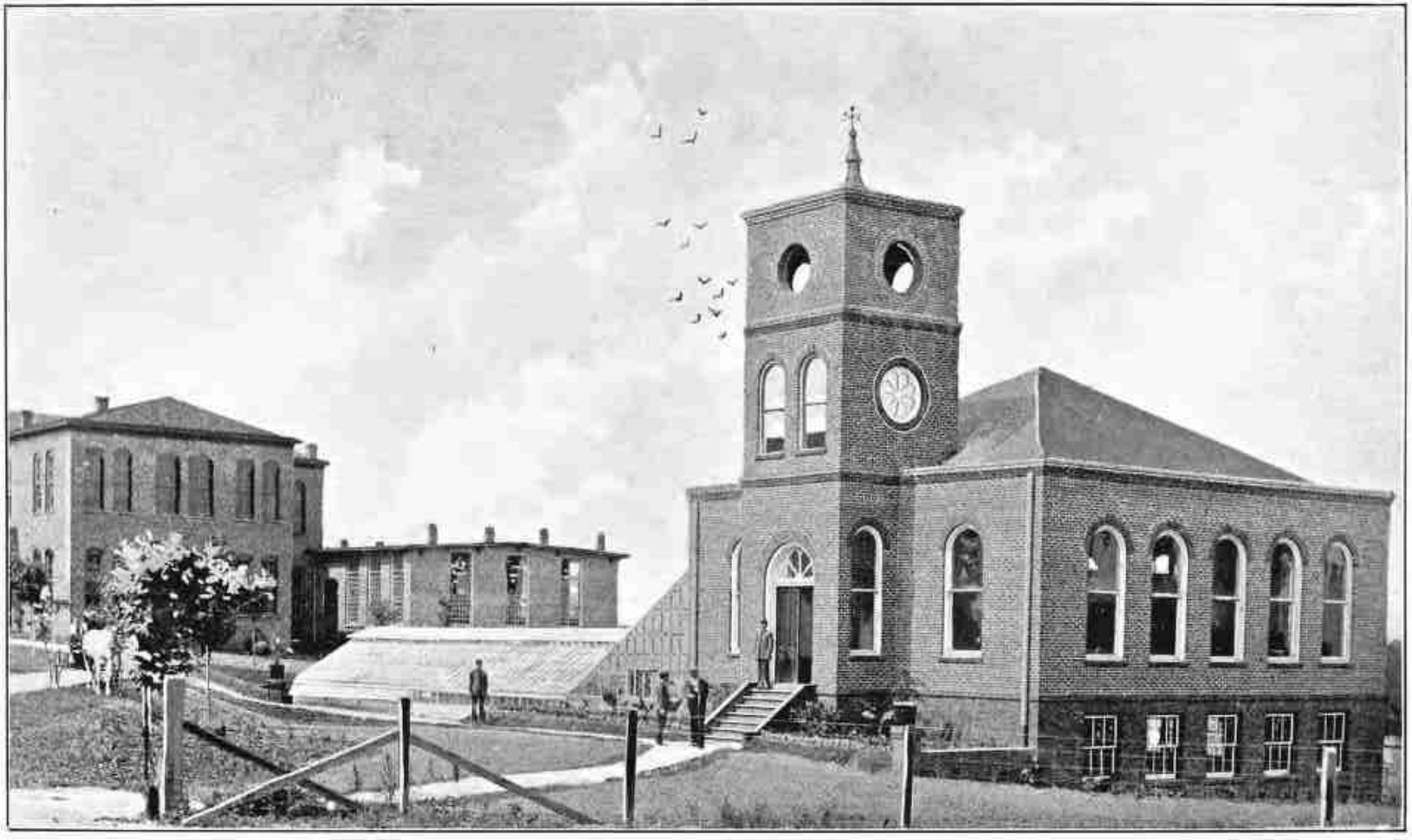
Field crops are corn, cotton, ensilage, peas, potatoes, hay, clover, oats, crimson and red clover, rye, soja beans, grasses, etc.

Instead of visionary theorists, we hope to turn out practical farmers, who will adopt the more improved methods of farming, thus aiding in advancing the cause in their several communities.

DEPARTMENT OF HORTICULTURE, ARBORICULTURE AND BOTANY.

PROFESSOR MASSEY.
MR. .....

A thorough knowledge of the structure and physiological functions of plants being the basis of all accurate knowledge of Horticulture, special effort will be made to give thorough instruction in Botany as a branch of Biology. Systematic Botany will also receive attention, and will be taught, not by the mere memorizing from a text book, but by a practical study of plants and the characteristics upon which classification is founded. Horticulture in all its branches will be treated as advanced work, to come in after the work in science is completed, so that in the Senior year there may be an opportunity for those who wish to make a specialty of Commercial Horticulture to prepare for the work of a professional Horticulturist, by practical study of green-house propagation, the forcing of vegetables, fruits and flowers under glass, landscape gardening, road making, the construction of horticultural buildings, and forestry.



HORTICULTURAL DEPARTMENT.

COURSE OF STUDY.

FRESHMAN YEAR.

Fall Term—Lectures on the elementary principles involved in soil culture. Soil physics.

Spring Term—Lectures on plant structure, with practical study of natural forms. Studies of the germinating plant, with a series of exercises planned to induce correct and close observation of the morphology of vegetation.

SOPHOMORE YEAR.

Fall Term—Structural Botany continued. Lectures on the application of principles to Pomology, with practice in budding and pruning.

Winter Term—Invertebrate Zoölogy and Entomology. Practice in pruning and root-grafting.

Spring Term—Collection of native plants and their systematic study, and collection and study of insects.

JUNIOR YEAR.

Fall Term—Lectures on Physiological Botany. Laboratory study of Vegetable Histology with the compound microscope.

Winter Term—Lectures on Foresty, timbers and forest products. Laboratory work continued.

Spring Term—Geology, with special reference to Palæobotany. Laboratory study of Cryptogams.

SENIOR YEAR.

Fall Term—Lectures on landscape gardening and the history of garden art. Practice in the propagation of plants and general greenhouse management.

Winter Term—Propagation of plants, lectures, and text book. Greenhouse practice.

Spring Term—Lectures on horticultural construction, and the commercial culture of vegetables, flowers, and fruits in the open ground and under glass. Plant breeding. 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 loss and breakage must be made good by student.

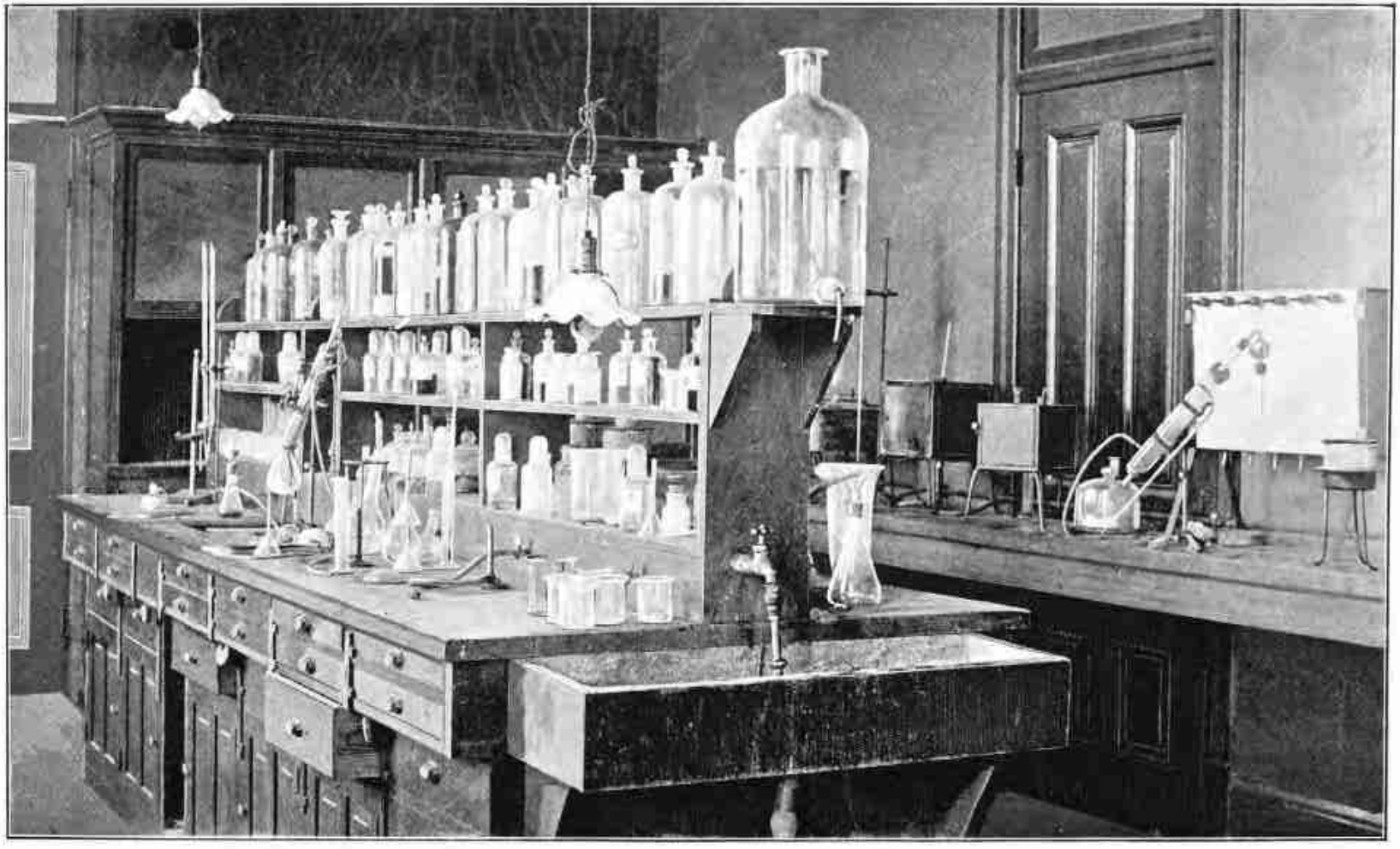
In the Freshman and Sophomore years, a deposit of fifty cents is required for use of hand magnifier, to be refunded when the glass is returned in good order. Students intending to make Horticulture their profession will be given special opportunities in the Senior year to become experts in greenhouse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



CHEMICAL LABORATORY.

DEPARTMENT OF CHEMISTRY.

PROFESSOR WITHERS. 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, which the more advanced students are expected to use very freely.

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 end is most successfully accomplished when the work is based on a broad knowledge of the pure science.

The work of the Freshman and Sophomore years and Fall term of the Junior year is required of all students. The subsequent work depends on the course in which the student is enrolled.

The Freshman class has for its work a brief introduction to General Chemistry, following the order of Roscoe's Primer.

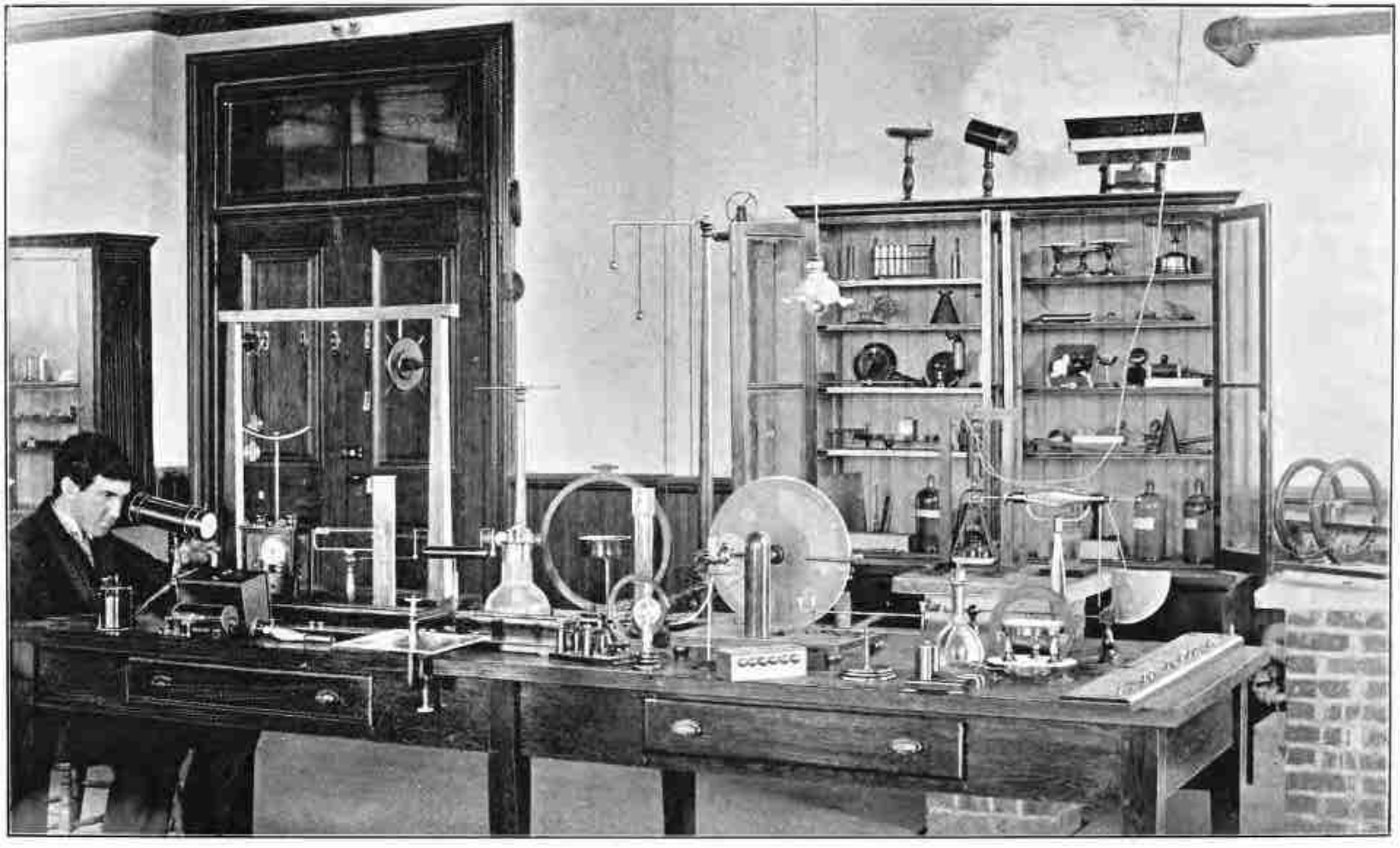
The Sophomore class has Inorganic Chemistry (Remsen). The common elements and their principal compounds are

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. Remsen and Randall's Guide is followed. The latter part of the year is devoted to Qualitative Analysis (Caldwell).

The Junior class has Industrial Chemistry during the Fall Term. Attention is given to the more common industries, as sulphuric acid making, bleaching, dyeing, fertilizer making, paints, oil, gas, &c. Visits with the class are made to plants in the vicinity. The metallurgy of iron and other useful metals is considered.

The lectures in Agricultural Chemistry follow 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.

Analytical Chemistry is continued by completing Qualitative Analysis, and an introductory course in Quantitative Analysis (Caldwell). At this time the student can adapt his laboratory work to his wishes, devoting his time to the agricultural, industrial or general branch of the subject. Attention is given to a discussion of Quantitative methods.



PHYSICAL LABORATORY.

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 Organic Chemistry follows Remsen's Text Book and Orndorff's Manual for Laboratory work. The Theoretical Chemistry follows Meyer, and the Historical Chemistry Von Meyer.

For Post-Graduate and other advanced students, courses of reading and laboratory work are assigned. The course concludes with some original investigation, which is to be the basis of a thesis for graduation.

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

DEPARTMENT OF PHYSICS AND ELECTRICAL ENGINEERING.

PROFESSOR BARNES. MR. WHITTED.

The value of thorough instruction in Elementary Physics to a practical man, in the different walks of life, cannot be overestimated; and the knowledge of the varied applications of the subtle force of electricity is becoming a necessity, as it is more and more in every way coming into daily use. The importance of this department is fully recognized, and it is the intention of this College to make instruction and practical work in it as beneficial as possible to the student. To this end a commodious and well-lighted Laboratory has been equipped with apparatus to illustrate the principles of physical science, and for instruction and practice in physical and electrical experiments, measurements and testing. We have the most approved forms of electric batteries, a magneto electric machine, a dynamo which

provides electric illumination of the College buildings, galvanometers and testing apparatus of considerable variety and the best types. With these the students are familiarized, by both instruction and practical adjustment and manipulation. Upon finishing their course, students should be as well able to measure the efficiency and output of an electric plant, as to weigh groceries or measure a wood-pile, and they have had sufficient instruction and experience to install, maintain and operate such a plant.

The College is illuminated with incandescent electric lights, run by a four-pole, direct-current dynamo. From the beginning, the whole work of installation, operation, maintenance and repair of the light plant has been done by students, as a part of their regular instruction.

In different courses, the work of this department extends through the Collegiate and Post-graudate classes, and is apportioned as follows :

In the Freshman class, all students are instructed in Elementary Physics. Recitations are illustrated by experiments, and followed by practical work in the Laboratory. The class is thus led to the acquirement of knowledge by study, by observation, and by doing the things taught. The text-books with this class are Gage's "Elements of Physics," and Gage's "Laboratory Manual." In all classes, the text-books are supplemented with lectures.

The Junior Class of the Engineering and Scientific Courses are instructed in electricity and magnetism during the second and third terms, with recitations, experiments, and practical work. The text-books used are Thompson's "Elementary Lessons in Electricity and Magnetism," and Day's "Electric Light Arithmetic" Included in the practical work is the operation of the electric-light plant.

The Senior class of the Mechanical Engineering and Scientific Courses are instructed in Electrical Engineering, including electrical testing in the Labratory, electro met-

allurgy, electric installation, and the designing, construction and operation of electric generators and motors. The text-books used are Thompson's "Elementary Lessons in Electricity and Magnetism," Brooker and Slingo's "Electrical Engineering" and Badt's "Dynamo Tender's Handbook," with lectures and practical work. The students of this class have charge of the dynamo, and each in turn, assisted by a Junior, operates the electric-light plant.

The Post-Graduates, of the Course in Mechanical Engineering continue the course in Electrical Engineering, including the calibrating of instruments, electrical testing, and the construction and repair of physical apparatus. They use as reference books, "Thompson's Dynamo Electric Machinery," Stewart and Gee's "Physics," Kempe's "Electrical Testing," Slingo's and Brooker's "Electrical Engineering," Crocker's "Electric Lighting."

Post-Graduates of the course in Civil Engineering have a regular course in Physical Laboratory practice, similar to that of the Mechanical Engineering Course but less extensive.

The department has a reference library of valuable books, to which the best publications will be added as they appear. Additions are being made to the apparatus as seems advisable. A considerable amount has been purchased during the present session.

DEPARTMENT OF MECHANICAL ENGINEERING.

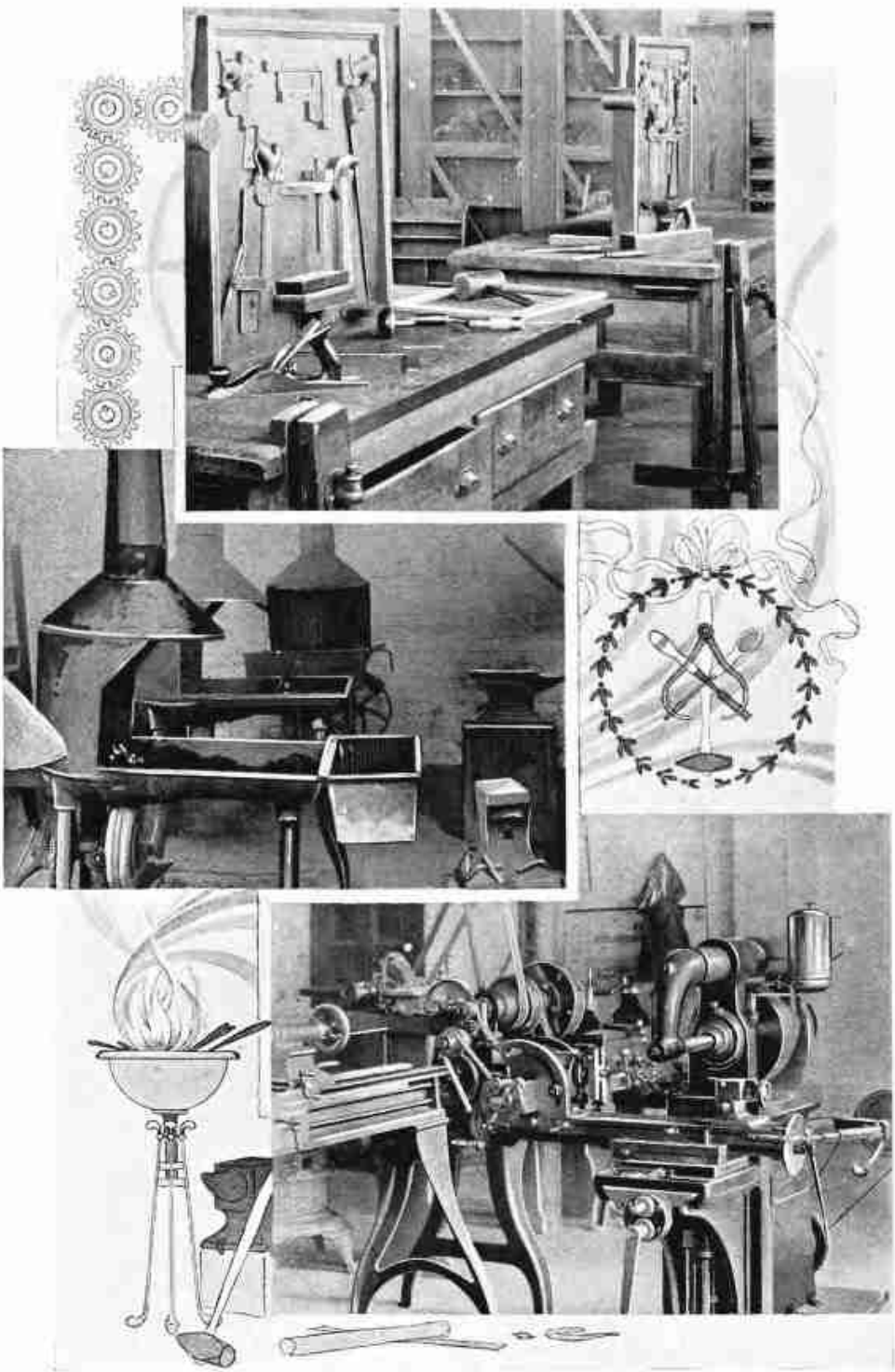
PROFESSOR CRAIGHILL,
MR PRITCHETT. MR. PARK
MR. CLARK.

The object of this department is to give such theoretical and practical instruction as will prepare the student for the work of either an engineer or mechanic. The time is about equally divided between recitation room work and manual training, the latter consisting of drawing and shop work.

A commodious building is used for instruction, on the first floor of which are a recitation room, engineering laboratory, machine shop, forge shop, wood-turning shop, and carpenter shop, all fully equipped. On the second floor are two drawing rooms, a blue-print room, recitation room and a library, in which various scientific and technical journals are kept on file.

COURSES OF INSTRUCTION.

Shopwork.—The instruction in this department is given with a two-fold object in view: First, to make the student a first-class mechanic; and second, to make him familiar with the nature of woods and metals and with the typical operations that have to be performed upon them to make them of commercial value. All work is made from blueprints, so that the student may learn how to read and interpret drawings made by others. The work shops are provided with the more important hand and machine tools, and the student has an opportunity to become familiar with them and to learn what can be accomplished by their use. In the last half of the fourth year, the students make some machine or apparatus that will add to the equipment of the department.



CARPENTER SHOP. BLACKSMITH SHOP. MACHINE ROOM.

The shops are equipped as follows: The carpenter shop contains thirty-four carpenter's benches and all the necessary tools for each bench. The wood-turning shop contains ten 12-inch swing lathes, a saw and dado machine, a 20-inch planer, a mortising and boring machine, a 30-inch band saw, a large jig saw, a 6-inch sticker, a mitering machine, a grindstone, a steam glue pot, and six benches equipped with iron vises and all the tools necessary for pattern-making. Each lathe is fully equipped with turning tools. The forge shop contains twenty-three forges, each of which is provided with an anvil and forging tools, besides which there is a full equipment of tools for general use in the shop. The machine shop contains two engine lathes, a universal milling machine with spiral and gear-cutting attachments, a planer, an upright drill, an emery wheel, and six vise benches arranged for instruction in vise work, and a fully equipped tool room. The power for the shops is furnished by a 25-horsepower Woodbury engine. When the shops are running, one of the students has charge of the engine and another of the boilers.

Drawing.—The object of the course in drawing is to enable the student to express his ideas clearly on paper. With this in view, he is first taught to use drawing instruments; next, to make working drawings of objects that exist, and then to put his own designs on paper in such a way that they will be intelligible to others. This course goes hand in hand with the theoretical and practical part of the instruction in engineering. In the lecture-room, the student is taught to shape his ideas into practical forms, in the drawing room, to put them on paper, and in the shops, to make them into material forms.

The first term of the first year is devoted to freehand sketching, and the remainder to practice in the use of drawing instruments and short course of elementary perspective.

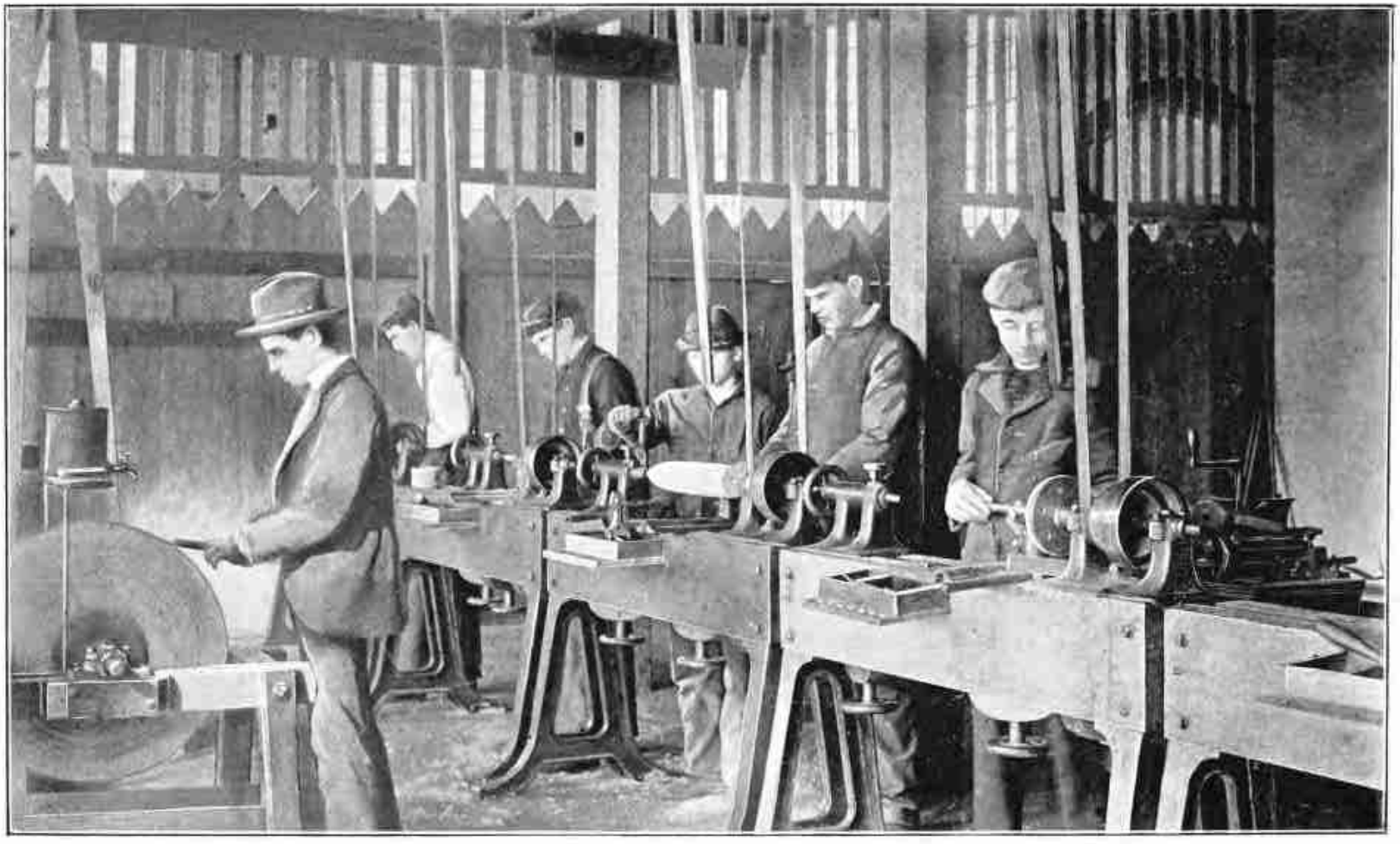
The instruction in the second year consists of a course of orthographic projections, and making working drawings of a casting or of some simple form of machine. In the third year, the work consists of the solution of various problems of mechanism, such as gearing, valves for the steam engine, and the like, and making a complete set of working drawings of some machine. In the fourth year, the drawing is entirely design. During the first term, the time is devoted to cam work, belting, and mechanical problems; the rest of the year, to the design of an engine, a boiler, a fly-wheel, a shaft coupling, or, some other problem that will illustrate the main principles of design. Each student is taught the blue-print process.

Steam.—This course includes a study of the properties of steam, the steam-engine, pumps, valve gears, indicator cards, boilers and chimneys, with a view to giving thorough instruction in the best modern practice in steam engineering.

Engineering Laboratory.—The objects to be accomplished in the Laboratory are as follows: First, to give the student practice in such experimental work as an engineer in the pursuit of his profession may be called upon to perform—such as valve-setting, engine and boiler testing, or measuring the flow of water; and second, to afford some practice in original research on engineering subjects.

The equipment of the Laboratory consists of a two-horse power engine, a ten-horse power engine (both of which were built by the students), a hot-air pumping engine, a machine for testing belt friction, calorimeter, apparatus for making analyses of flue gases, a hydraulic ram, a small water-motor, a Worthington water-meter, friction brakes, weirs, and slide rules, an indicator, planimeter, thermometers, tanks, and scales for making tests.

In addition to the Laboratory, there is a boiler-house



LATHE ROOM.

equipped with three thirty-horse power boilers, several pumps, a Worthington receiver, a Sturtevant blower, and a jet condenser, all of which are available for experimental purposes.

Mechanism.—The student is tanght the principles of the ordinary mechanisms met with in practice. He learns the methods of transmitting motion from one point to another, how to find the value of trains of wheels, and to arrange pulleys and design cam work.

Mechanism of Cotton Machinery.—The principles and object of the various machines used in the manufacture of cotton are explained, with suggestions as to the methods of running them to obtain the best results.

Mechanics.—During the first term of the third year, the general principles of Mechanics are studied. Throughout the fourth year, the principles already learned are applied to the calculation of the strength of materials, and the strength and stability of structures. Also, a study is made of such reliable tests as have been made to determine the strength of materials most commonly used in practice, with a view to becoming familiar with the proper constants to be used in engineering work.

Mill Engineering.—A study is made of the best modern mill practice, the cotton mill being taken as an example. The student learns to proportion and arrange the machines and buildings so that there shall be a minimum loss from stoppage, and the mill shall be well balanced. He learns to arrange and lay out the shafting, and to find the power necessary to drive the machinery. Visits are made to the mills and manufacturing establishments in the neighborhood to see machinery in operation.

Heating and Ventilation.—The object of this course is to teach the student to warm and ventilate buildings in the most approved manner. The principles of the different systems in use are fully explained. The student

makes calculations and drawings for heating and ventilating some building, which is taken for an example. A study is made of the extensive system in operation at the College.

POST-GRADUATE WORK IN MECHANICAL ENGINEERING.

Facilities are offered for one or two years of post-graduate work in this department, leading to the degree of Mechanical Engineer.

DEPARTMENT OF CIVIL ENGINEERING.

PROFESSOR RIDDICK.

Instruction is given in the following subjects:

SOPHOMORE CLASS.

Architecture and Building.—This includes lectures on buildings and building materials, as well as Architectural Drawing. The student is taught to draw plans, write specifications, and make out bills of materials, and also the methods of constructing houses and the uses of the various materials of construction. He studies the subject from the standpoints of both architect and contractor.

JUNIOR CLASS.

Graphic Statics.—This consists of the graphical determination of "bending moment," "vertical shears," and the stresses in frame structures and machine parts.

Surveying.—The student is taught land and topographical surveying and the rudiments of railroad and municipal engineering, including lectures on road-making. The Winter Term is devoted to the study of the theory of surveying and engineering, and the Spring Term to field work, each student being required to work up and plat his field

notes. The College owns a transit, Y-level, compass, tapes, chains, rods, etc.

Text-book: Wentworth's Surveying.

SENIOR CLASS.

Roofs and Bridges.—This consists in the application of analytical methods to the determination of stresses in roof and bridge trusses and other frame structures. It includes, also, the design and construction of arches, domes, retaining walls, and masonry dams.

Text-book: Lanza's Applied Mechanics.

Hydraulics.—The students are taught the methods of measuring the flow of streams; the laws governing the flow of water in pipes and conduits; the determination of water power in streams, and the testing of hydraulic motors.

Text-book: Merriman's Hydraulics.

FIFTH, OR GRADUATE YEAR.

This department offers facilities for one year of post-graduate work in civil engineering, leading to the degree of C. E. The work of this course is given in table of studies on last pages of this book.

DEPARTMENT OF MATHEMATICS.

PROFESSOR RIDDICK.

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 are required to do as much supplementary work as the 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 higher 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.

Text-books: Milne's Arithmetic, Wells' Higher Algebra.

SOPHOMORE CLASS.

This class completes Algebra during the Fall Term. The remainder of the session is 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, in addition, two recitations a week in Trigonometry.

Text-books: Wentworth's Geometry, Wentworth's Trigonometry.

JUNIOR CLASS.

The first part of the year is spent in the completion of Trigonometry, with practical applications. The remainder of the session is devotod 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.

Text-book: Nichol's Analytical Geometry.

SENIOR CLASS.

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

Text-book: Taylor's Calculus.

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: Hill's Foundations of Rhetoric; Buehler's Exercises. Critical Readings for this class. Thurber's Addison's Essays.

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, or Hawthorne's Literature. Genung's Outlines of Rhetoric. Critical Readings for class-room: Leach's DeQuincey, Gray Lyrics.

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. Critical readings for class-room: Two of Webster's Speeches, Milton Lyrics, Garnett's English Prose.

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 class-room: Thayer's Select Plays will be used.

Text-books: Pancast's Introduction to English 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 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 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.

CAPTAIN JOHN C. GRESHAM, SEVENTH U. S. CAVALRY.

The instruction is in Infantry Drill Regulations, close and extended order, including the Schools of the Soldier, Company and Battalion, and embraces also recitations or lectures on Military Science.

The uniform of cadet gray costs about seventeen dollars.

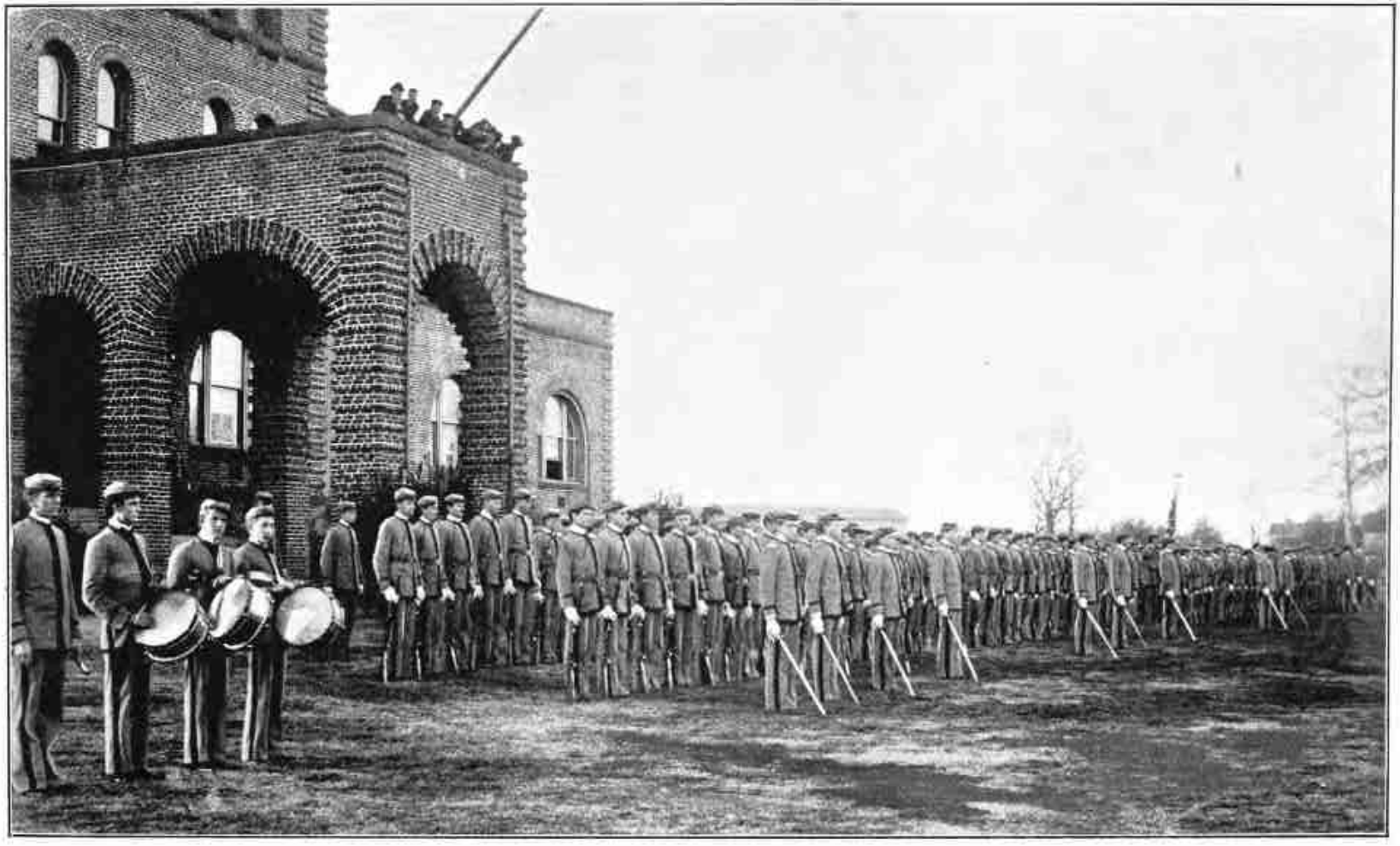
The Battalion is organized in three companies:

CADET OFFICERS.

Major: B. J. Wootten. Adjutant: R. H. Merritt.
Sergeant-Major: D. O. Uzzle. Color-Sergeant: F. C. Doyle.
Color Corporal: F. M. Foy. Color Corporal: C. Whitaker.
Principal Musician: A. T. Smith.

OFFICERS.	COMPANY A.	COMPANY B.	COMPANY C.
Captain	J. L. Knight.	C. B. Kendall.	C. D. Harris.
1st Lieut	S. G. Kennedy.	Lea Watson.	J. W. Carroll.
2d Lieut	N. L. Gibbon.	W. H. Sanders.	H. W. Primrose.
1st Sergeant	G. F. Syme.	N. R. Stansel.	C. B Adams.
2d Sergeant	A. R. Kennedy.	T. Sugishita.	M. Parker.
3d Sergeant	B. C. Fennell.	H. M. Curran.	D. F. Asbury.
4th Sergeant	G. C. Uzzle.	M. Squires.	M. W. Boushall.
5th Sergeant	E. G. Smith.	E. H. Maddrey.	D. G. Robeson.
1st Corporal	F. B. Kuykendal.	C. S. Siewers.	F. H. Lemly.
2d Corporal	W. A. Stevenson.	J. Fennell.	W. C. Sugg.
3d Corporal	C. L. Mann.	R. B. Seyks.	S. M. Wetmore.
4th Corporal	H. B. Young.	I. B. Tucker.	F. C. Lambe.

Retired with full rank on account of consolidation of companies:
Captain W. A. G. Clark.
First Lieutenant A. H. Oliver.
Second Lieutenant J. S. Buffaloe.



MILITARY DEPARTMENT.

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 purpose 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 buildings in every direction, giving almost perfect drainage, as well as handsome views of the College buildings from every direction.

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 six 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.

MAIN BUILDING.

This is of brick, with brownstone trimmings, and is 170 by 60 feet; part four stories in height, and the remainder two.

The lower floors contain the offices of the President, the Secretary of the Faculty, and the Bursar; the library; several recitation rooms; chemical and physical laboratories; the chapel, and the armory.

The upper stories are occupied by students.

In this, as in the other buildings, every precaution has been taken to secure good sanitation. The rooms are all well lighted, well ventilated and conveniently arranged.

ENGINEERING BUILDING.

This is a plain, substantial, two-story brick building, with large annex. It contains the laboratories, drawing-rooms and recitation-rooms, and shops of the department.

BOILER-HOUSE.

This is a single-story brick building, containing boilers, fire-pump, and the machinery connected with the steam-heating plant.

PRIMROSE HALL AND PLANT HOUSES.

The facilities for instruction in Botany and general Horticulture have been greatly increased by the erection, during the Summer of 1896, of a separate building for the use of the Professor of Horticulture, Arboriculture and Botany, and a fine range of glass structures attached thereto. The Primrose Hall was named in honor of Mr. W. S. Primrose, the first President of the Board of Trustees. It consists of a brick building 42x42 and two stories in height. The lower or basement floor is occupied by the Horticultural Laboratory and boiler-room. All the indoor work in the Horticultural Department is done here, such as potting plants and root grafting for the nursery in the winter. Here are also the heating apparatus for the glass structures

and the Hall above. On the second floor is the Lecture-room and the Botanical Laboratory, with a small office for the Professor. The plant houses are five in number, and are immediately accessible from the Lecture-room and Laboratories, so that material for instruction can be had at any time. The five greenhouses open into each other and are separated by glass partitions, that different night temperatures can be maintained to suit the various purposes to which the houses are devoted. Here is kept a general collection of plants for botanical study and for practice in Floriculture, and in two of the houses winter forcing of vegetables and fruits is carried on, in order that the students may have practice in a line of work that is rapidly assuming commercial importance in the State. The entire building and greenhouses are heated by hot water in the most complete manner.

DAIRY AND BARN.

These are frame buildings, of modern design, and carefully planned for the purposes to which they are devoted. The barn is 50 by 72 feet, and three stories high, and affords shelter for the herds of stock ; the dairy is 20 by 40 feet, and two stories high—the upper story being used as the Agricultural Society hall.

WATAUGA HALL.

This is a handsome three-story brick building, named in honor of the Watauga Club, which was largely instrumental in securing the establishment of the College. The first floor contains a kitchen, a dining-room, and a cloak-room, while in the upper stories are twenty-six rooms used as dormitories.

DORMITORIES.

The College has four brick buildings, used exclusively as dormitories, containing a total of fifty-four rooms.

WATER SUPPLY.

Appreciating the necessity of a pure and plentiful supply of water, the College had six driven wells put in. The depth of these wells is from 55 to 80 feet. The water is pumped for distribution from these wells into three large tanks, and also into one fire reservoir.

LIGHT AND HEAT.

These buildings are lighted by electricity. The electric plant is the property of the College and is operated by the Engineering students. In this way these students learn the practical care and conduct of an Electric plant. All the buildings except the Engineering are heated by steam.

All the buildings are heated with steam, and are lighted with incandescent Electric lamps.

DIVISION OF SESSION.

The session is divided into three terms, designated as the Fall, the Winter and the Spring Term.

Although students will be admitted at any time, 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 an examination which will show ample preparation for the class he may wish to enter.

REPORTS.

Reports of deportment and absence from College duties are sent to parents or guardians at the end of every month, and attention is called to any lack of diligence on the part of the student.

Reports of scholarship and deportment are likewise sent at the end of each term. In the grading 100 is the maximum, 90 or over is considered excellent, 80 or over creditable; 60 is the lowest mark that will entitle the student to pass to a higher class. In calculating the average for the term the subjects count equally.

HONORS.

The Punctuality Roll contains the names of students who have not been absent from a single exercise during the year.

The Honor Roll contains the names of those whose average in all studies for the year is 90 or more.

Special Mention is made at graduation of any student whose average in any study during his Junior and Senior years was above 90.

First Distinction is given in each course to the member of the graduating class who makes the highest average for the course—provided such average for the whole course is above 90.

Students attaining first distinction in the courses are entitled to deliver commencement orations.

DEGREES.

One Baccalaureate degree is conferred. Upon those who have successfully passed all the examinations in the various studies of the course in Agriculture, the course in Science, or the course in Engineering, the degree of Bachelor of Science is conferred.

To graduates in the course in Agriculture or in Science who have successfully passed examinations, after a supplementary year's work under direction of the Faculty, the degree of Master of Science is given. Similarly, the degree of Mechanical Engineer, for work in Mechanical Engineering, and Civil Engineer for work in Civil Engineering. The fee for the Baccalaureate Diploma is $3, and for M. E., C. 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 SOCIETY.

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.

ALUMNI ASSOCIATION.

This Association of the College graduates meets annually, during Commencement week, and aids in refreshing

the pleasant memories of College days, as well as keeping its members in active touch with their *Alma Mater*.

President, Chas. Pearson, '94, Raleigh, N. C.

Vice-President, David Clark, '95, Raleigh, N. C.

Sec.-Treas., W. H. Harriss, '95, Charlotte, N. C.

LIBRARY.

The Library now contains about twenty-three hundred volumes. Additions are being made to the number every year, and the way now seems clear for rapidly increasing the numbers.

There are reference libraries for the use of students placed in the Departments of Agriculture, Horticulture, Chemistry, Physics, English, Mechanical and Civil Engineering.

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. As this labor has to be apportioned among many, no first year student can hope to make more than two or three dollars a month in this way.

PRIZES.

A prize of ten dollars is given to the Freshman student who, in addition to his class-work, earns the largest amount of money by his skill in agricultural labor outside, and a second prize of five dollars is given to the student who, in addition to his class work, earns the next largest amount of money by his skill in agricultural labor outside.

DISCIPLINE.

There must be order and 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 report sent to parents or guardians monthly and at the end of each term. 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.

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. There is no room in our system for idlers.

STUDENTS.

AGE AND QUALIFICATIONS.

Applicants for the Freshman Class must be at least fifteen years old, and must, if required, furnish satisfactory evidence of good moral character. They must pass satisfactory examinations on the following subjects: 1st. Arithmetic through common and decimal fractions. The examination will cover the ground laid down in some such standard Arithmetic as Wentworth or Milne. 2nd. In English applicants will be examined on the elements of the language—the examination including the matter treated in such books as Reed and Kellogg's First Lessons, or Harvey's Grammar. 3rd. In Geography the applicant is expected to be familiar with work of the grade of Maury's

Manual. 4th. In History, the examination will be confined to the main events in American history.

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, who alone have authority to make such appointments, as the College authorities cannot make them.

ADMISSION.

The County Supervisors of Education are usually willing to conduct the examination of all applicants for admission. This examination will be held at the county-seats on the second Thursdays of July and September, or at such times as will suit the examiner.

All young men, however, wishing to enter, can be examined at the College on the day before its opening, if they did not pass the examination at the county-seats. These will be held at the following hours: Mathematics, 9 A. M.; English, 11 A. M.; Geography, 2 P. M.; History, 3:30 P. M. Examinations for conditioned 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, for a permit for examination or for registration.

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 Sunday morning, students must attend the church service in Raleigh, each student being allowed to select the church.

Each occupant of a dormitory is expected to keep his room in good order and ready for inspection at any time.

CLOTHING, ETC.

Each student is required to have one uniform suit.

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

TUITION.

Tuition is $20 per scholastic year. County appointees are entitled to tuition and lodging *free of cost.* Post-graduates are excused from tuition fees.

BOARD AND LODGING.

Board and lodging are 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.

Board is payable monthly, in advance, and where any student fails to pay promptly on the 1st, notice will be

sent to his parent or guardian; and in case payment is not made by the 10th, the student will be dropped from College.

COLLEGE CHARGES PER SESSION.

I. COUNTY STUDENTS.

1. Tuition free.	
2. Board, at $8 per month, per session of 9½ months	$ 76 00
3. Fuel and lights for entire session	12 50
4. Medical fee and medicines, payable semi-annually in advance	4 00
Total	$ 92 50

II. FOR OTHER STUDENTS.

1. Tuition, per session	$ 20 00
2. Board, at $8 per month, 9½ months	76 00
3. Fuel, lights ~~and medical attendance~~ for entire session	12 50
4. Medical fee and medicines, payable semi-annually in advance	4 00
5. For lodding in College building, room, furniture, bedding, etc	10 00
Total	$122 50

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.

Of these charges, $15.25 must be paid upon entering College. The uniform suit costs $16.85, and must be paid for when finished. The making usually takes about one month. The remainder is payable *in monthly installments, in advance.*

Each student must make good all apparatus, etc., he breaks, and for this purpose must make a deposit at the beginning of the year.

All students must furnish their own books, stationery, and drawing instruments and materials.

TABLE OF STUDIES.

FRESHMAN CLASS—FOR ALL COURSES.

	Fall.	*Winter.*	*Spring.*
Agriculture and Physiology	2	2	2
Botany	2	..	1
Botanical Laboratory	..	..	2
Introductory Chemistry	..	2	..
Physics	3	2	2
Physical Laboratory	..	2	2
Algebra	6	5	5
English	4	4	4
History	1	1	1
Carpenter Shop	4	4	4
Freehand and Mechanical Drawing	3	3	3

COURSE IN AGRICULTURE.

SOPHOMORE CLASS.

	Fall.	*Winter.*	*Spring.*
Agriculture	..	2	2
Agricultual Practice	2	2	4
Botany	2	2	..
Botanical Laboratory	3	4	4
General Chemistry	3	3	3
Chemical Laboratory	4	4	4
Geometry and Trigonometry	5	5	6
English	3	3	3
History	1	1	1
Architecture	3	..	..
Drawing	5	..	..

JUNIOR CLASS.

Agriculture	3	3	3
Dairy Practice	4	4	..
Horticulture	2	3	2
Horticultural Practice	4	2	2
Agricultural Chemistry	3	3	3
Industrial Chemistry	2	..	..
Qualitative and Quantitative Analysis	6	6	6
Surveying	..	2	2
Field Practice in Surveying	..	..	9
English	3	3	3
History	1	1	1

SENIOR CLASS.

Agriculture	5	5	5
†Agricultural Practice	2	2	2
Horticulture	4	4	4
†Horticultural Practice	4	4	4
*Organic and Theoretical Chemistry	3	3	3
Agricultural Chemical Analysis	8	8	8
English	3	3	3
History	1	1	1

†Agricultural Chemical Analysis may be substituted.
*Agricultural and Horticultural Practice may be substituted.

COURSE IN ENGINEERING.

SOPHOMORE CLASS.

	Fall.	*Winter.*	*Spring.*
Architecture	3	2	..
Mechanical and Architectural Drawing	5	5	5
General Chemistry	3	3	3
Chemical Laboratory	4	4	4
Geometry and Trigonometry	5	5	6
English	3	3	3
History	1	1	1
Shopw'k(Wood-turning & Pattern-making)	6	6	6

JUNIOR CLASS.

Mechanic, and Graphic Statics	2	2	2
Drawing	5	5	5
Industrial Chemistry	2	..	..
Steam, Valve Gears, Boilers	4	2	..
Engineering Laboratory	..	..	1
Elements of Mechanism	..	1	..
Mechanism of Cotton Machinery	..	..	2
Electricity and Magnetism	..	2	2
Analytical Geometry	4	3	3
Surveying and Field Practice	..	2	11—
English	3	3	3
History	1	1	1
Shopwork (Forging)	9	9	..

SENIOR CLASS.

Applied Mechanics and Engineering	2	5	2
Roofs and Bridges	3	..	..
Hydraulics	..	..	2
Mill Engineering	..	..	2
Drawing (Machine Design)	5	5	5
Heating and Ventilation	..	..	1
Engineering Laboratory	..	..	2
Electrical Engineering	1	1	1
Electrical Testing	2	2	2
Calculus	4	4	..
English	3	3	3
History	1	1	1
Shopw'k (Chipping, Filing & Machine W'k)	9	9	9

COURSE IN APPLIED SCIENCE.

SOPHOMORE CLASS.

	Fall.	*Winter.*	*Spring.*
Botany	2	2	....
Botanical Laboratory	3	4	4
General Chemistry	3	3	3
Chemical Laboratory	4	4	4
Mathematics	5	5	7
English	3	3	3
History	1	1	1
Architecture	3	..	..
Drawing	5	5	5

JUNIOR CLASS.

Elective	7	8	8
Mathematics	4	3	3
English	3	3	3
History	1	1	4
Elective practice work	15	15	15

SENIOR CLASS.

Elective	11	11	11
English	3	3	3
History	1	1	1
Elective practice work	15	15	15

POST-GRADUATE COURSE IN MECHANICAL ENGINEERING.

	Fall.	*Winter.*	*Spring.*
Steam Engineering	3	3	3
Heat	1	..	..
Physical Laboratory	4	4	4
Boilers	..	..	1
Shop Visits	1	1	1
Hydraulics and Hydraulic Motors	1	1	1
Machine Design	4	4	4
Engineering Laboratory	2	2	2
Advanced Applied Mechanics	3	3	3
Mill Engineering	2	2	2
Least Squares	2	..	..
Differential Equations	..	1	..
Precision of Measurements	..	..	1
English	2	2	2
Thesis	5	5	5

POST-GRADUATE COURSE IN CIVIL ENGINEERING.

	Fall.	*Winter.*	*Spring.*
Mechanics	4	..	..
Mechanics of Machinery	..	2	2
Topographical Surveying	..	2	4
Construction	..	4	4
R. R. Surveying	4	..	..
Sanitary Engineering	3	3	3
Astronomy	3	3	..
Bridge Design	6	6	..
Hydraulics	..	..	4
English	2	2	2
Mill Engineering	2	2	2
Physical Laboratory	1	1	1
Least Squares	2	..	..
Applied Mechanics	3	3	..
Geodetic Surveying	..	..	3
Road Making	..	..	3
Thesis	..	5	5

REGISTER OF ALUMNI.

CLASS OF 1893.

Name. *Degree.* *Address.*

ROBERT WILSON ALLEN,.....B. E.....Preston, Md.
Prof. of Mathematics, Preston Normal School.

SAMUEL ERSON ASBURY,.....B. S.....Raleigh, N. C.
Assistant Chemist N. C. Agr. Experiment Station.

HENRY EMIL BONITZ,.....B. E.....Wilmington, N. C.
Architect and Contractor and Adjuster of Fire Losses. Trustee N. C. College of Agriculture and Mechanic Arts.

FRANK FULLER FLOYD,.....B. E.....Knoxville, Tenn.
Supt. Linotype Machines for the Knoxville *Journal.*

CHARLES DUFFY FRANCKS,.....B. E.....Raleigh, N. C.
Instructor in Math. and English, N. C. College of Agriculture and Mechanic Arts.

EDWARD MOORE GIBBON,.....B. E.....Salem, N. C.
With the Salem Iron Works.

GEORGE PENDER GRAY,.....B. S.....Silver Lake, Fla.
Farm Manager.

CHARLES BOLLING HOLLADAY,.....B. E.....Raleigh, N. C.
In Division Freight Office, Southern R. R.

WILLIAM MCNEIL LYTCH,.....B. E.....( )

WALTER JEROME MATHEWS,.....B. E.....Goldsboro, N. C.
Engineer to the Eastern N. C. Asylum for the Insane. [N.C.

JAMES WILLIAM MCKAY,.....B. E.....Black Mountain,
Civil Engineer and County Surveyor.

FRANK THEOPHILUS MEACHAM,.....B. S.....Biltmore, N. C.
Supt. of Stock at Biltmore Farm.

CARL DEWITT SELLARS,.....B. E.....Altamaha, N. C.
Engineer for Altamaha Cotton Mills.

CHARLES EDGAR SEYMORE,.....B. S.....Louisburg, N. C.
Farmer.

BUXTON WILLIAMS THORNE,.....B. E..... Miss.
Book-keeper.

WILLIAM HARRISON TURNER,.....B. E.....Salem, N. C.
With Wachovia Mills (F. & H. Fries).

CHARLES BURGESS WILLIAMS,.....B. S.....Baltimore, Md.
Student of Chemistry and Hopkins Scholar at Johns Hopkins University.

LOUIS THOMAS YARBROUGH,.....B. E.....Raleigh, N. C.
With Southern Bell Telephone Co.

SAMUEL MARVIN YOUNG,.....B. E.....Raleigh, N. C.
With Julius Lewis Hardware Co.

CLASS OF 1894.

Name.	*Degree.*	*Address.*
CHARLES EDWARD CORPENING,	B. E.	Lenoir, N. C.
Farmer.		
DAVID COX, JR.,	B. E.	Hertford, N. C.
Architect and Engineer.		
ROBT. DONNELL PATTERSON, JR.,	B. S.	Raleigh, N. C.
Dairyman N. C. Agr. Experiment Station.		
CHARLES PEARSON,	B. E.	Raleigh, N. C.
Architect.		
ZEBBIE GEORGE ROGERS,	B. E.	Danville, Va.
Secretary and Treasurer.		
JOHN HYER SANDERS,	B. E.	Choccowinity, N.C.
Locomotive Engineer for Lumber Co.		
BENJAMIN FRANKLIN WALTON,	B. S.	Biltmore, N. C.
In Forestry Dept., Biltmore Farm.		
JOHN MCCAMY WILSON,	B. E.	Salem, N. C.
With Salem Iron Works.		

FRANK THEOPHILUS MEACHAM	M. S.	Biltmore, N. C.
See Class of 1893.		

CLASS OF 1895.

Name.	*Degree.*	*Address.*
THOMAS MARTIN ASHE,	B. E.	Raleigh, N. C.
Architect with Carpenter & Peebles.		
JAMES ADRIAN BIZZELL,	B. S.	Raleigh, N. C.
Assistant in Chemistry, N. C. College of Agriculture and Mechanic Arts.		
JOHN ISHAM BLOUNT,	B. E.	Raleigh, N. C.
Tutor of Sub-Freshman Class, N. C. College of Agriculture and Mechanic Arts.		
JAMES WASHINGTON BRAWLEY,	B. S.	Mooresville, N. C.
Farmer.		
WALTER AUSTIN BULLOCK,	B. S.	Bainbridge, Ga.
Manager Brooks Dairy Farm.		
DAVID CLARK,	B. E.	Raleigh, N. C.
Assistant in Drawing, N. C. College of Agriculture and Mechanic Arts.		
GEO. WASHINGTON CORBETT, JR.,	B. E.	Raleigh, N. C.
Engineer of the Raleigh Electric Company.		[N. C.
EDWIN SPEIGHT DARDEN,	B. S.	Speight's Bridge,
Farmer.		

WILLIAM KEARNEY DAVIS, JR.,....B. E.....Louisburg, N. C.
JOSEPH CHARLES DEY, ...B. S.....Norfolk, Va.
With Williams Bros., Commission Merchants.
LEE BARDEN ENNETT,.....B. S.....Cedar Point, N. C.
Farmer.
ISAAC HENRY FOUST,.....B. E.....Charlotte, N. C.
Supt, Roller Mills.
CHARLES WYLLIS GOLD,.....B. S.....Wilson, N. C.
Business Manager of Wilson *Times*, and Dairy Farmer.
WILLIAM HENRY HARRISS,.....B. E.....Charlotte, N. C.
Draughtsman for the D. A. Tompkins Co.
CHRISTOPHER MILLER HUGHES,....B. E.....Raleigh, N. C.
Post Graduate Student of Chemistry, N. C. College of Agriculture and Mechanic Arts.
MALCOLM BEALL HUNTER,.....B. E.....Charlotte, N. C.
With Ada Cotton Mills.
SAM'L CHRISTOPHER MCKEOWN,...B. E.....Cornwall, N. C.
Supt. Machine Shops.
MANN CABE PATTERSON,.....B. E.....Salem, N. C.
With Salem Iron Works.
ABRAM HINMAN PRINCE,.....B. S.....Oxford, N. C.
Supt. of Farm, Oxford Orphan Asylum.
VICTOR VASHTI PRIVATT,.....B. E.....Edenton, N. C.
With Lumber Company.
HOWARD WISWALL, JR.,.....B. E.....Washington, N. C.
In Coast Geodetic Survey.
CHARLES GARRETT YARBROUGH,..B. E.....Pittsburg, Pa.
With Western Electric Co.

CHAS. MARCELLUS PRITCHETT,.....M. E.....Raleigh, N. C.
Instructor in Drawing and Shop Work, N. C. College of Agriculture and Mechanic Arts.

CLASS OF 1896.

Name.	*Degree.*	*Address.*
DANIEL ALLEN,.....	B. S.....	Raleigh, N. C.

With S. C. Pool's Shoe Store.

GEORGE STRONACH FRAPS,.....B. S.....Baltimore, Md.
Student of Chemistry and Honorary Hopkins Scholar, Johns Hopkins University.
MARION JACKSON GREEN,.....B. S.....Victor, N. C.
Assistant in Victor High School.
JOHN HOWARD,.....B. S.....Tarboro, N. C.
Architect and Engineer.

WILLIAM COLBERT JACKSON,.....B. S.....Winterville, N. C.
Farmer.

ROBERT GRAHAM MEWBORNE,.....B. S.....Richmond, Va.
Assistant Chemist, Virginia-Carolina Chemical Co.

LEVI ROMULUS WHITTED,.....B. S.....Raleigh, N. C.
Assistant in Physics and Electricity, N. C. College of Agricultur and Mechanic Arts.

HENRY LLOYD WILLIAMS,.....B. S.....Gatesville, N. C.

LAMUEL ERSON ASBURY,.....M. S.....Raleigh, N. C.
See Class of 1893.

CHARLES BURGESS WILLIAMS,.....M. S.....Baltimore, Md.
See Class of 1893.

DAVID CLARK,.....M. E.....Raleigh, N. C.
See Class of 1895.

WILLIAM HENRY HARRISS,.....M. E.....Charlotte, N. C.
See Class of 1895.

CHAS. MARCELLUS PRITCHETT,.....C. E.....Raleigh, N. C.
See Class of 1895.