AGRICULTURAL AND MECHANICAL COLLEGE OF KENTUCKY.

ANNUAL REGISTER

OF THE

STATE COLLEGE OF KENTUCKY,

LEXINGTON, KENTUCKY.

STATEMENT OF THE CONDITION, MATRICULATES, AND COURSES OF STUDY FOR THE COLLEGIATE YEAR 1890-91, WITH THE ANNOUNCEMENTS FOR 1891-92.

SESSION BEGINS WEDNESDAY, SEPTEMBER 9, 1891.

LEXINGTON, KY.:
TRANSYLVANIA PRINTING CO.,
1891.

INTRODUCTORY.

Agricultural and Mechanical Colleges in the United States owe their origin to an act of Congress, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2, 1862. The amount of land donated was 30,000 acres for each Representative in the National Congress. Under this allotment Kentucky received 330,000 acres. Several years elapsed before the Commonwealth established an Agricultural and Mechanical College under the act. When established it was not placed upon an independent basis, but was made one of the Colleges of Kentucky University, to which Institution the annual interest of the proceeds of the Congressional land grant was to be given for the purpose of carrying on its operations. The land-scrip had meanwhile been sold for fifty cents per acre, and the amount received —$165,000—invested in six per cent. Kentucky State bonds, of which the State became the custodian in trust for the College.

The connection with Kentucky University continued till 1878, when the act of 1865, making it one of the Colleges of said University, was repealed, and a Commission was appointed to recommend to the Legislature of 1879-80 a plan of organization for an Institution, including an Agricultural and Mechanical College, such as the necessities of the Commonwealth require. The city of Lexington offered to the Commission (which was also authorized to recommend to the General Assembly the place, which, all things considered, offered the best and greatest inducements for the future and permanent location of the College) the City Park, containing fifty-two acres of land, within the limits of the city, and thirty thousand dollars in city bonds for the erection of buildings. This offer the county of Fayette supplemented by twenty thousand dol-

lars in county bonds, to be used either for the erection of buildings or for the purchase of land. The offers of the city of Lexington and of the county of Fayette were accepted by the General Assembly.

By the act of incorporation, and the amendments thereto, constituting the charter of the Agricultural and Mechanical College of Kentucky, liberal provision is made for educating, free of tuition, the energetic young men of the Commonwealth whose means are limited. The Normal Department, for which provision is also made, is intended to aid in building up the Common School system by furnishing properly qualified Teachers. This College, with the associated departments which will, from time to time, be opened as the means placed at the disposal of the Trustees allow, will, it is hoped, in the no distant future, do a great work in advancing the educational interests of Kentucky. Being entirely undenominational in its character, it will appeal with confidence to the people of all creeds and of no creed, and will endeavor, in strict conformity with the requirements of its organic law, to afford equal advantages to all, exclusive advantages to none. The liberality of the Commonwealth in supplementing the inadequate annual income arising from the proceeds of the land scrip invested in State bonds, will, it is believed, enable the Trustees to begin and carry on, upon a scale commensurate with the wants of our people, the operations of the Institution whose management and oversight have been committed to them by the General Assembly of Kentucky.

BOARD OF TRUSTEES OF THE AGRICULTURAL AND MECHANICAL COLLEGE OF KENTUCKY.

Chairman ex officio,

HIS EXCELLENCY, GOVERNOR S. B. BUCKNER.

Secretary,

HART GIBSON.

Trustees Whose Term of Office Expires January 10, 1892.

CAPT. W. D. NICHOLAS	Fayette County.
HON. R. A. SPURR	Fayette County.
COL. L. J. BRADFORD	Covington.
DR. J. D. CLARDY	Christian County.

Trustees Whose Term of Office Expires January 10, 1894.

JUDGE W. C. IRELAND	Boyd County.
GEN'L D. C. BUELL	Louisville.
W. W. TICE	Graves County.
COL. HART GIBSON	Lexington.

Trustees Whose Term of Office Expires January 10, 1896.

JUDGE P. P. JOHNSTON	Fayette County.
JUDGE W. B. KINKEAD	Fayette County.
DR. R. J. SPURR	Fayette County.
PHILEMON BIRD	Shelby County.

Executive Committee.

W. B. KINKEAD, Chairman.

PHILEMON BIRD.

W. D. NICHOLAS,

HART GIBSON,

DR. R. J. SPURR.

FACULTY OF INSTRUCTION.

JAMES K. PATTERSON, PH. D., F. S. A., PRESIDENT,
Professor of Mataphysics and Civil History.

JOHN SHACKLEFORD, A. M., VICE-PRESIDENT,
Professor of the English Language and Literatnre.

ROBERT PETER, M. D.,
EMERITUS Professor of Chemistry.

JAMES G. WHITE, A. M.,
Professor of Mathematics and Astronomy.

F. M. HELVETI, A. M.,
Professor of the French and German Languages and Literature.

JOHN H. NEVILLE, A. M.,
Professor of the Latin and Greek Languages and Literature.

J. H. KASTLE, PH. D.,
Professor of General Organic and Agricultural Chemistry.

RURIC N. ROARK, A. B.,
Principal of the Normal Department and Professor of Pedagogy.

H. GARMAN,
Professor of Zoology and Entomology.

*_____
Professor of Geology and Paleontology.

W. B. STARK, B. S.,
Professor of Agriculture, Horticulture and Botany.

M. L. PENCE, M. S.,
Professor of Civil Engineering and Physics.

CHAS. D. CLAY, FIRST LIEUT. U. S. A., COMMANDANT.
Professor of Military Science.

J. W. PRYOR, M. D.,
Professor of Human and Comparative Anatomy and Physiology.

*To be appointed.

WALTER K. PATTERSON,
Principal of the Academy.

J. LEWIS LOGAN, A. B.,
Assistant in the Academy.

J. W. NEWMAN, B. S.,
Assistant in the Normal Department.

ROBERT L. BLANTON, M. LIT.,
Assistant in Greek and Latin, and in the Academy.

HUGH FRAZER, B. S.,
Assistant in the Academy.

MISS MARY C. ROARK, A. B.,
Assistant in the Normal Department.

MRS. LUCY B. BLACKBURN,
Assistant in the Academy.

JAMES MURRAY,
Practical Horticulture.

COMMERCIAL AND PHONOGRAPHIC DEPARTMENT.

Faculty of Instruction.

C. C. CALHOUN, Principal.

Assistants.

SHERMAN W. FERRIS,

M. E. MILLIKAN,

W. H. BERRYMAN,

R. L. REYNOLDS.

EXPERIMENT STATION OF THE STATE COLLEGE OF KENTUCKY.

Board of Control.

DR. R. J. SPURR, Chairman.
JUDGE W. B. KINKEAD, Chairman of Executive Committee.
W. D. NICHOLAS, Treasurer.
COL. HART GIBSON,
PHIL. BIRD,
R. A. SPURR,
DR. J. D. CLARDY,
J. K. PATTERSON, President of the College.
M. A. SCOVELL, Director, Secretary.

Station Officers.

M. A. SCOVELL, Director.
A. M. PETER, } Chemists.
H. E. CURTIS, }
H. GARMAN, Entomologist and Botanist.
C. L. CURTIS, Assistant Agriculturist.
MISS ALICE M. SHELBY, Stenographer.

Address of the Station, LEXINGTON, KY.

GRADUATES OF 1890-91.

BERRY, HENRY SKILLMAN, B. S.
CLARDY, U. L., B. S.
MUNCEY, VICTOR EMANUEL, B. S.
WALLIS, WILLIAM RUSSELL, C. E.
WARNER, BETTIE CALLIE, B. S.

UNDERGRADUATES.

ADAMS, KATHERINE INNIS.....Lexington.
ADAMS, T. E.....Bryantsville.
ALLEN, ELMA V.....Lexington.
ALLEN, NELLIE PERRY.....Lexington.
ANDERSON, JAMES BLYTHE.....Lexington.
ARNETT, EUGENE BRITIAN.....Hendricks.
ATKINS, MARY LYONS.....Lexington.
ATKINS, SALLIE B.....Lexington.
ATTEBERY, GEORGE DAVID.....Munfordville.
AULICK, EDWIN CHESTERFIELD.....Morgan.

BAILEY, JOHN FOREST.....Gold City.
BAIRD, CHARLES NEELEY.....Stomers.
BAIRD, JAMES A.....Long Grove.
BAKER, ANDREW JACKSON.....Manchester.
BAKER, JAMES MADISON.....Manchester.
BALL, EDWARD DAVID.....Corydon.
BARBER, LANAS SPURGEON.....Ocala, Fla.
BARKLEY, H. O.....Caseyville.
BARNES, CHARLES ELMER.....Rockwell, Texas.
BARTLETT, GEORGE E.....Lexington.
BARTLETT, MORRIS WHITON.....Lexington,

BEATTY, HARLAN TURNER ..... Beattyville.
BELL, JOHN LAMBERT ..... Lexington.
BELL, LAURENCE EDWARD ..... Lexington.
BERRY, LEONARD CASSELL ..... Lexington.
BERRY, NATHANIEL PETTIT ..... Lexington.
BIGGS, JAMES DAVIS ..... Greenup.
BIRD, ANNIE BELLE ..... Bagdad.
BIRD, SALLIE HANNA ..... Bagdad.
BISSICKS, KATIE ..... Lexington.
BLACK, H. C ..... Ewingford.
BLACK, MATTIE ..... Lexington.
BLAIR, TILLIE ..... Chilesburg.
BLEIDT, ANTHONY BONAPARTE ..... Canton.
BOSWELL, JOHN HART ..... Leesburg.
BOSWELL, JOHN WILLIAM ..... Lynchburg.
BOSWORTH, POWELL EDWARD ..... Fort Spring.
BOTTS, JOHN WILLIAM ..... Shelbyville.
BOYERS, JACOB MARION ..... Connersville.
BRADSHAW, GEORGE BUCKNER ..... Casky.
BRAND, EDWARD ..... Broadwell.
BRENT, HARRY K. ..... Lexington.
BRENTLINGER, JACOB CHRISTOPHER ..... Louisville.
BROWN, MARGARET WICKLIFFE ..... Louisville.
BROWN, MARY OWEN ..... Louisville.
BRYAN, DANIEL ..... Lexington.
BRYAN, JOHN I ..... Lexington.
BURGESS, CORRILDA HESTER ..... Louisa.
BURGESS, WILLIAM ..... St. Bernace, Ind.
BURTON, ROBERT ALLEN ..... Willisburg.
BYRNES, CHRISTOPHER ..... Lexington.

CALDWELL, EDNA ALLEN ..... Lexington.
CAMPBELL, JOSEPH EPPERSON ..... Lexington.
CAMPBELL, SALLIE LEWIS ..... Lexington.
CAMPBELL, WALTER GILBERT ..... Flat Lick.
CAREY, GEORGE BURGESS ..... Louisa.
CAREY, JOCK ..... Louisa.
CARNAHAN, JAMES WILLIAM ..... Manchester.
CARROLL, JOHN SPEED ..... Williamsburg.
CASSIDY, ELIZABETH ..... Lexington.
CASSIDY, JOHN JOSEPH ..... Lexington.
CASSIDY, JAMES LESLIE ..... Lexington.
CHAPMAN, ALEXANDER RAY ..... Uniontown.
CHICKERING, ALVIN EDWARD ..... Louisville.
CHRISTIAN, BIRDIE ..... Walnut Hill.
CHRISTIAN, SUSIE ..... Lexington.

CLARK, GEORGE FRY ..... Winchester.
CLARKE, MARY EVA ..... Lexington
CLAY, SAMUEL BROOKS ..... Paris.
*CLOUSE, EDWARD ..... Buckeye.
COBURN, JOHN ANDERSON ..... Maysville.
COCKRILL, CURTIS JETT ..... Jett's Creek.
COLBERT, RICHARD ..... Lexington.
COLLINS, MARGARET M. ..... Lexington.
COMBS, DAVID LAND ..... Lexington.
COMBS, MAYME TILFORD ..... Lexington.
COOPER, JOHN SHERMAN ..... Cain's Store.
COURTNEY, EDMUND ..... Main's
COWHERD, ROBERT LEE ..... Campbellsville.
COX, ARTHUR MELVILLE ..... Cynthiana.
COY, CONRAD C ..... Kirksville.
CRAIG, DILLA ..... Berry.
CROUCH, T. J. ..... Olympia.
CROXTON, RICHARD HENDERSON ..... Kirklevington.
CRUTCHER, EFFIE MOUNTIE ..... Ducker's
CRUTCHFIELD, JAMES STAPLETON ..... Alzey.
CURTIS, CARLETON COLEMAN ..... Greendale.
CURTIS, S. T. ..... Piqua.
CURTIS, WILLIAM J ..... Piqua.

DANAHY, JOSEPH PATRICK ..... Lexington.
DAVINPORT, JOHN WHELAND ..... Lexington.
DAVIS, CLARENCE M ..... Caseyville.
DAVIS, MILES HILLRY HARDING ..... Caseyville.
DAY, SQUIRE THOMAS ..... Short Creek.
DELOZIER, CHARLES EDWARD ..... Williamsburg.
DOLAN, THOMAS FRANCIS ..... Louisville.
DOUGLAS, MAMIE F ..... Lexington.
DOWNING, KITTIE ..... Lexington.
DOWNING, JOSEPH MILTON ..... Lexington.
DUDLEY, WILLIAM R ..... Pembroke.
DURHAM, GEORGE D. ..... Pineville.

ELKIN, FIELDING CLAY ..... Lexington.
ELLISON, GEORGE W ..... Williamsburg.
ELLISON, JAMES P. ..... Williamsburg.
ENGLISH, W. H. ..... Stephensburg.
EVERIN, J. E ..... Eden.
EWERS, HARDEN DAVID ..... Slater.
FAIG, JOHN THEODORE ..... Lexington.

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*Deceased.

FAIN, LARKIN.....Mt. Lebanon.
FARLEY, ALLEN SEARGENT.....Evarts.
FAULKNER, JOHN.....Hampton.
FERGUSON, LEWIS BUCK.....Versailles.
FLYNN, OLIVER MASON.....Hedges.
FOLEY, WILLIAM JOSEPH.....Lexington.
FORD, LUCY BELLE.....Lexington.
FOX, HARRY.....Earlington.
FRAZER, JOSEPH CHRISTIE WHITNEY.....Lexington.
FRAZER, WILLIAM ROBERT.....Lexington.
FULTON, GEORGE.....Harper, Kansas.

GARRED, ULYLSSES ANDERSON.....Louisa.
GASTINEAU, MAURICE.....Lexington.
GAY, JOEL LA FAYETTE.....Bowen.
GEARY, JOHN THOMAS.....Lexington.
GENTRY, CHARLES E.....Wheatley.
GIFFORD, JOHN.....Blue Lick Springs.
GOLDEN, THOMAS.....Brush Creek.
GORDON, JOHN EDWARD.....Lexington.
GORDON, WILLIAM LAYTHAN.....Winchester.
GRAVES, BUFORD ALLEN.....Lexington.
GREENE, J. W.....Wasiota.
GREENE, MAGGIE L.....Brandenburg.
GREER, CLARENCE WORTH.....Glasgow Junction.
GRIFFING, EMMIE ROSETTA.....Lexington.
GUNN, HENRY MARTIN.....Lexington.
GUNN, THOMAS.....Lexington.

HACKNEY, WILLIAM RICHARD.....London.
HALL, MELVIN.....Paintsville.
HAMILTON, L. L.....Uniontown.
HAMILTON, OURIN.....Camer.
HAMILTON, NOLA.....Flat Gap.
HARDIN, GEORGE H.....Beech Grove.
HARDIN, MARK L.....Beech Grove.
HARRIS, COURTLAND C.....Franklin.
HARRISON, WINN GUNN.....Lexington.
HART, BETTIE BRENT.....Lexington.
HART, JOHN WESLEY.....Woodburn.
HAWKINS, MINNIE LYLE.....Lexington.
HAYES, JAMES EDWIN.....Winchester.
HAYS, JAMES MORRISON.....Barbourville.
HEARNE, VIRGINIA KIRTLEY.....Walnut Hill.
HENDRON, SUSIE.....Nicholasville.
HERRICK, NELLIE.....Paris.

HICKS, A. L.....Danleyton.
HOBDY, E. J.....Franklin.
HOBDY, WILLIAM COTT.....Franklin.
HOLBROOK, MYRTLE.....Lynn.
HON, GEORGE.....Bowen.
HOOVER, MOLLIE.....Switzer.
HOPGOOD, JULIA.....Morganfield.
HOPGOOD, OLLIE.....Morganfield.
HORNBROOK, SALLIE ADAMS.....Lexington.
HOSKINS, W. N.....Pineville.
HOWARD, E. F.....La Rue.
HOWARD, JOSHUA E.....Lock.
HOWARD, NEWTON P.....Salyersville.
HOWARD, ULYSSES SIMPSON GRANT....Wallen's Creek.
HOWARD, WILLIAM O.....Salyersville.
HUDSON, ERNEST.....Lexington.
HUGHES, LEONARD SAMUEL.....Frankfort.
HUNT, IRA CAMPBELL.....New Liberty.
HUNT, IRENE LEONORA.....Lexington.
HUNT, MARY CRAIG.....Lexington.
HYDEN, WILLIAM H.....Manchester.

INGRAM, MATILDA FORD.....Anthoston.
INNES, MAGGIE.....Frankfort.

JACKSON, KATHERINE.....London.
JACKSON, MCCLELLAN LEE.....Owingsville.
JAMES, BETTIE.....Somerset.
JOCHUM, KATHERINE M.....Lexington.
JOHNSON, JAMES RICHARD.....Louisa.
JOHNSON, RICE W.....Pineville.
JONES, CLAY H.....Gamaliel.
JONES, J. D.....Buckeye.
JONES, MATISON BOYD.....Tuttle.
JONES, MINCIE JOSHUA.....Lockport.
JONES, THOMAS MARTIN.....Mullis.
JORDAN, JAMES BAZEL.....Middletown.

KEISER, MARSHALL.....Alexandria.
KELLY, MAUDE MORROW.....Lexington.
KIDWELL, OSCAR.....Irvine.
KINCAID, ELIZABETH SHELBY.....Lexington.
KING, BRUCE ELLIOTT.....Frost.
KING, JOHN VAN.....Frost.
KING, WILLIE BELLE.....Louisville.
KISSICK, HATTIE L.....Lexington.

KLEIN, JULIA M ..... Lexington.
KNOX, ALGAN THOMAS ..... See.
KROESING, LILLIE ..... Lexington.
LAINE, EDGAR HATTIN ..... Hickory Flat.
LAND, HAMILTON HEADLEY ..... Lexington.
LAWHORN, JESSE SHERMAN ..... Poplar Hill.
LEWIS, JAMES L ..... Glen Dale.
LEWIS, SAMUEL HIGGINS ..... Lexington.
LITCHFIELD, IRA ..... Cadiz.
LITTELL, EARLY ..... Williamstown.
LYLE, EDWIN S ..... Lexington.
LYLE, JOEL IRVINE ..... Lexington.

MADDOX, EDWARD COLE ..... Eminence.
MAGOFFIN, JAMES SHELBY ..... Lexington.
MAHER, WILLIAM ..... Lexington.
MANNING, CHARLES NATHANIEL ..... Manchester.
MANNING, HUGH R ..... Manchester.
MARICLE, HILARY D ..... Calloway.
MAXEY, JOHN GEE ..... Tompkinsville.
MAY, CORNELIUS FOSTER ..... White Oak.
MCCAIN, C. M ..... Sharpe.
MCCARTY, JAMES THOMAS ..... Stamping Ground
MCCAW, PAUL JOHNSTONE ..... Fort Spring.
MCCLELLAN, JULIA W ..... Lexington.
MCCLURE, JOHN HARRISON ..... Louisa.
MCCLURE, MATTIE ..... Gallup.
MCCONATHY, JAMES ASA ..... Lexington.
MCCONATHY, MITCHELL ..... Lexington.
MCCONATHY, MARY BELLE ..... Lexington.
MCCOUGHLIFF. MARY KATHERINE ..... Lexington.
MCDOWELL, MADELEINE ..... Lexington.
MCGAUGHEY, HUME ..... Newstead.
MCLAUGHLIN, T. A ..... Lexington.
MCVEAN, WILLIAM ALEXANDER ..... Grant's Bend.
MEDLEY, G.W ..... Brandenburg.
MILES, LINNEUS OLIVER ..... West Louisville.
MILLARD, RICHARD MONTGOMERY ..... Salyersville.
MITCHELL, JAMES WILLIAM ..... Buckeye.
MOORE, BLANCHE LARENA ..... Lexington.
MOORE, JAMES B ..... Payne's Depot.
MOORE, MAUDE MULLER ..... Jacksonville.
MOORE, RICHARD DUNN ..... Marksbury.
MOORE, ROBERT LELAND ..... Lexington,
MOORE, SAMUEL MARCUS ..... Payne's Depot.

MOORES, CLAY.....Station Camp
MORAN, HUGH.....Payne's Depot.
MOREN, JOHN JAMES.....London.
MORGAN, NELLIE K. H.....Lexington.
MORRISON, MAHALA.....Gap Creek.
MULLIGAN, JAMES J.....Lexington.
MULLIGAN, LOUIS H. C.....Lexington.

NEAL, SAMUEL JONES.....Pineville.
NELSON, ROSA S.....Lexington.
NEVILLE, ZELINDA.....Lexington.
NEWTON, NATHAN ALEXANDER.....Lexington.
NORMAN, CHARLES EDWARD.....Smith's Mills
NORMAN, ROBERT MOORE.....Smith's Mills.
NORTON, CHARLES FISHBACK.....Carlisle.
NUNLEY, WILLIAM D.....Cannonsburg.

OLIVER, JAMES MEDLEY.....Frenchburg.
OOTTS, NINA PEARL.....Lexington.
OTT, MINNIE.....Lexington.

PAGE, WILLIAM SEABURY.....Mason.
PARRISH, HENRY J.....Indian Fields.
PATRICK, JOHN.....Jackson.
PEEBLES, MATTIE ELIZABETH.....Paris.
PERKINS, RILEY.....Mullis.
PETTIT, GEORGE NATHANIEL.....Lexington.
PHELPS, BESSIE.....Dabney.
PHILLEY, BRUCE MORSON.....Coy.
POPE, MAUDE MILLER.....Danville.
POTTINGER, SAMUEL LEE.....New Haven.
POWELL, LUKE.....Ashland.
POWERS, JOHN LAY.....Barbourville.
POWERS, MARFIELD W.....Carrollton, Mo.
PREWITT, ALMA.....Athens.
PREWITT, ELIZABETH HOWELL.....Athens.
PREWITT, SILAS.....Knox.

RAILEY, MORTON SANDERS.....Versailles.
RAMEY, JAMES MORGAN.....Owingsville.
RAMEY, JOHN WALTER.....Owingsville.
RAMSEY, W. H.....Main's.
REED, RICHARD HORATIO.....Hickory Flats.
REED, THOMAS HAWKINS.....Troy.
RENICK, OBERIA.....Lexington.
REYNOLDS, FRANCIS CRAIG.....Lexington.
ROSENBAUM, DORA.....Lexington.
ROWLAND, IDA.....Nicholasville.

RHORER, EDWARD ..... Loradale.
RICE, HENRY CLAY ..... Pineville.
RICE, ROBERT BOYD ..... Pineville.
RICHARDS, JOHN H ..... Nolin.
RICHARDSON, PRESLEY COBURN ..... Guston.
ROBERTS, BURNAM ..... Louisa.
ROBERTS, HILERY BRYAN ..... Payne's Depot.
ROBERTS, MARTHA BELL ..... Louisa.
ROBINSON, JOHN THOMAS ..... Raccoon Bend.
ROBINSON, LUCY ..... Port Royal.
ROCK, JOHN WILLIAM ..... Irvine.
SANDERS, JOSEPH ANTONY ..... Zoneton.
SAUNDERS, ELLEN ..... Lexington.
SCOTT, J. R ..... Spring Station
SCOTT, LIZZIE ..... Ducker's.
SCOVELL, FRANK ELMER ..... Newton, Ill.
SEBREE, LAWRENCE ..... New Columbus
SEE, SHERMAN ..... See.
SHACKLEFORD, LEWIS PINKERTON ..... Lexington.
SHANKLIN, JAMES W. ..... Zoneton.
SHAW, HIRAM, JR ..... Lexington.
SHAW, THOMAS R ..... Cadiz.
SHEDD, JESSIE JUNE ..... Lexington.
SHEDD, WILLIAM BURCHARD ..... Lexington.
SHELBY, GEORGE SHANKLIN ..... Lexington.
SHELBY, KATHARINE ..... Lexington.
SHELBY, THOMAS H ..... Lexington.
SHIVELY, OMAR HOLLINGER ..... Burdick.
SHROPSHIRE, LAURA DIDLAKE ..... Lexington.
SILER, DEMPSEY S ..... Gray.
SILER, SYDNEY BARNES ..... Gray.
SIMMONDS, CORA ..... Lewisburg.
SINCLAIR, JOHN HENRY CLAY ..... Porter.
SLEM, C. H ..... Whitley.
SMITH, ALLAN ..... Lexington.
SMITH, CHARLES CALVIN ..... Pineville.
SMITH, DENNY PERRYMAN ..... Golden Pond.
SMITH, E. D ..... Sweet Owen.
SMITH, ETTA D ..... Sygart's Valley.
SMITH, G. D ..... Sweet Owen.
SMITH, HAROLD O'DONNELL ..... Versailles.
SMITH, LOCKETT ..... Harrodsburg.
SMITH, WILLIAM PRYOR ..... New Castle.
SNODDY, JOHN ..... Rowletts.
SOUTHGATE, BUTLER S ..... Lexington.

SOUTHGATE, FANNIE ..... Lexington.
SPARKS, WILLIAM ..... Leesburg.
SPEARS, THOMAS C ..... Kansas City, Mo.
SPENCER, FANNIE W ..... Lexington.
SPEYER, ROSA ..... Lexington.
STALLARD, J. M ..... Wheatley.
STAMPER, JOSEPHINE ..... St. Helen's.
STEELY, JOHN SHERMAN ..... Williamsburg.
STEPHENS, WILLIAM W ..... Cropper.
STEVENS, BIRDIE ..... Lexington.
STEVENSON, CHARLES G ..... Chilesburg.
STEVENSON, ETTA ..... Chilesburg.
STEWART, ASHBY ADAMS ..... Eagle Hill.
STEWART, ROCHAMBEAU ..... Pikeville.
STEWART, ROBERT LEE ..... Pikeville.
STURGELL, JAMES CARNAHAN ..... Catlettsburg.
SWEENEY, EDWARD BRECKENRIDGE .... Liberty.

TALBOT, JOHN GUNNELL ..... Versailles.
TAYLOR, GRAHAM ..... Lexington.
THEOBALD, GRAHAM VARNON ..... Williamstown.
THOMPSON, HENRY FRANK ..... Harrodsburg.
THOMSON, JAMES WALTER ..... Shelbyville.
THORNTON, JOHN WILGUS ..... Lexington.
THRELKELD, JAMES PRESTON ..... Uniontown.
THRELKELD, W. S ..... Pleasureville.
TODD, CHARLES LEE ..... Lexington.
TODD, MAGGIE ..... Richmond.
TOMLINSON, ELIZABETH ..... Bryantsville.
TOMPSON, LUNETTE ..... Lexington.
TOMPSON, WILLIAM HARVEY ..... Lexington.
TRIGG, JOHN HENRY ..... New Columbus.
TRIGG, WILLIAM CLAY ..... New Columbus.
TRISLER, EMMA D ..... Eubank.
TURPIN, GEORGE D ..... Ambrose.

VANCE, GEORGE ..... Pendleton.
VANDEREN, WILLIAM MUSSULMAN ..... Berry.
VANMETER, BENJAMIN F ..... Lexington.
VAUGHAN, ROBERT ELCOTT ..... Laso.
VILEY, GEORGE WARREN ..... Lexington.
VINSON, GEORGE RANDALL ..... Louisa.

WALDROP, EDGAR ..... East Eagle.
WARE, CORA E ..... Lexington.
WARNER, HATTIE H ..... Lexington.
WARREN, HENRY THOMSON ..... Donerail.
WARREN, JOSEPH EVANS ..... Donerail.

WEARREN, WILLIAM ORUS ..... McCreary.
WELCH, JOHN T ..... Stanton.
WELLS, ALBERT ..... Cartersville.
WEST, JOSEPH GIGNILLAITTE ..... Lexington.
WEST, WILLIAM ..... Science Hill.
WETHERBY, SAMUEL DAVIS ..... Middleton.
WHAYNE, ULY ..... Oakton.
WHEAT, JOHN FRY ..... Middleburgh.
WHEATLEY, WARDER WILLIAM ..... Wheatley.

WHITE, CLARA W ..... Lexington.
WHITE, TAYLOR GILBERT ..... Manchester.
WIGGINTON, JUNIUS MILLER ..... Lexington.
WILLIAMS, HARVEY BASCOME ..... Lawrenceburg.
WILLIAMS, JOHN DAVIDSON ..... Catlettsburg.
WILLIAMS, LORENZO M ..... Rock Bridge.
WILLIS, BENJAMIN GRANT ..... Bullittsville.
WILLIS, SAMUEL CULVIN ..... Williamstown.
WILSON, CORINNE CLEBURN ..... Lexington.
WILSON, PATTIE ..... Waco.
WILSON, ROSA M ..... Lexington.
WILSON, SIBBIE E ..... Lexington.
WISE, CURTIS ..... Boston.
WITT, JOHN F ..... Flat Lick.
WOMACK, WARD BENJAMIN ..... Happerrell.
WOOLEY, CICELY DE GRAFFENRIED ..... Lexington.
WOOLEY, CHARLES W ..... Lexington.
WORTON, VON ..... Hampton.

YOUNG, HARDIN SINGLETON ..... Highland.

Matriculates in Commercial Department.

ADAMS, T. F. ..... Lexington, Ky.
ADAMS, W. A ..... Lexington, Ky.
ADAMS, MISS HARRIETT ..... Scottsville, Va.
ALFORD, R. F ..... Payne's Depot, Ky.
ARNETT, E. B ..... Hendricks, Ky.
ANTHONY, G. C ..... Bridgewater, N. C.

BRADLEY, MISS ROSA ..... Lexington, Ky.
BROWN, MISS FANNIE ..... Lexington, Ky.
BOGGIS, K. S ..... Lawrenceburg, Ky
BUCKLEY, HARRY ..... Lexington, Ky.

1890-91

BULLOCK, W. O., JR. ..... Lexington. Ky.
BRISCOE, C. A ..... Georgetown, Ky.
BARBOUR, B. D ..... Lexington, Ky.
BAKER, MISS BERTHA ..... Lexington, Ky.
BRYAN, MISS C. ..... Lexington, Ky.
BALLOU, R. M ..... Burnside, Ky.
BULLOCK, SAMUEL ..... Lexington, Ky.
BURTON, J. P ..... Stanford, Ky.
BURNS, GEORGE ..... London, Eng.
BARR, S. P ..... Lexington, Ky.
BENNETT, R. L ..... Pellville, Ky.
BAKER, MISS KATIE MAY ..... Lexington, Ky.
BOWEN, B. F ..... Ruddle Mills, Ky.
BRIGHT, MISS BELLE ..... Lexington, Ky.
BALDWIN, G. F ..... Milburn, Ky.
BALES, L. S ..... Rose Hill, Va.

CARNES, R. D ..... Bishopville, S. C.
CLAY, SAMUEL ..... Lexington, Ky.
CHENEY, W. E ..... Eleville, Ga.
CASSIDY, W. D ..... Lexington, Ky.
CLARK, P. A ..... Meadow View, Va.
CARY, U. G ..... Morehead, Ky.
CHAPMAN, WM ..... Springfield, Mo.
CHASTAIN, CLAUDE ..... Oakville, Ky.
CLARK, J. F ..... Lexington, Ky.
CLOUD, MISS MARY ..... Mt. Sterling, Ky.
COATES, T. J ..... Greenville, Ky.
CONNOR, E. C ..... Paris, Ky.
COOMBS, J. C ..... Jackson, Ky.
CORNELISON, BROWN ..... Mt. Sterling, Ky.
CAVEATT, S. O ..... Stowers, Ky.
CHILDS, MISS M. A ..... Lexington, Ky.
DEAN, MISS SUSIE ..... Lexington, Ky.
DABNEY, J. W ..... Lexington, Ky.
DAY, MISS CLARA ..... Frozen Creek, Ky.
DEAN, MISS ANNA ..... Lexington, Ky.
DEAN. HARRY ..... Lexington, Ky.
DUNLAP, JOSEPH ..... Lexington, Ky.
DAWSON, EDGAR ..... Scottsville, Va.
DALE, R. T ..... Keene, Ky.
DALY, F. M ..... Vernon, Mo.
DAY, MISS M. S ..... Lexington, Ky.
DAVIS, MISS L ..... Lexington, Ky.
DANKS, S. H ..... Rockport, Ky.
DAY, W. R ..... Frozen Creek, Ky.

ERWIN, D. M. ..... Gainesville, Ky.
EWING, H. R. ..... Carlisle, Ky.
ELSEY, J. F. ..... Avon, Ky.
ELROD, MISS MARY J ..... Lexington, Ky.
EDMONSON, S. B ..... Lexington, Ky.

FRAZIER, MISS BESSIE ..... Lexington, Ky.
FREEMAN, C. YANCY ..... Lexington, Ky.
FEARRINGTON, F ..... Belle Voir, N. C.
FOX, HAMP ..... Earlington, Ky.
FITZGEREL, MISS C. S ..... Georgetown, Ky.
FAULCONER, C. L ..... Athens, Ky.

GALVIN, D. P ..... Lexington, Ky.
GROSS, MISS JENNIE ..... Lexington, Ky.
GILBERT, MISS SUSIE ..... Lexington, Ky.
GORMLEY, PHIL ..... Lexington, Ky.
GRISSOM, MISS M. T ..... Raleigh, N. C.
GRAY, W. A ..... Lexington, Ky.
GIROD, L. N ..... Lexington, Ky.
GORHAM, J. H ..... Lexington, Ky.
GRIGGS, W. C ..... Dowlesville, Ky.
GRAHAM, MISS EMMA ..... Danville, Ky.
GARRISON, MISS M. J ..... Manchester, Ky.
GABBARD, J. J ..... Kingstown, Ky.
GILL, JAMES ..... Lexington, Ky.
GOLSON, MISS CARRIE ..... Autaugaville, Ala.
GILROY, MISS E. S ..... Lexington, Ky.
GROSS, LUTHER ..... Holbrook, Ky.
GAY, MISS FANNIE ..... Lexington, Ky.

HUGHES, L. S ..... Frankfort, Ky.
HARRELL, C. P ..... Valdosta, Ga.
HEAD, THOMAS H ..... Knottsville, Ky.
HOLMES, F. C ..... Waterbury, Conn.
HUTCHISON, G. W ..... Keene, Ky.
HANES, CLYDE ..... Nicholasville, Ky.
HUFFMAN, JAMES W ..... Lexington, Ky.
HARRISON, J. W ..... Little Rock, Ky.
HIGGINS, MISS A. G ..... Lexington, Ky.
HIBBETS, G. P ..... Salt Air, Ohio.
HINKLE, S. D ..... Lexington, Ky.
HINKLE, A. T ..... Lexington, Ky.
HODGES, MISS M ..... Lexington, Ky.

JETT, GEORGE ..... Doylesville, Ky.
JONES, W. F ..... Sherrills Ford, N. C.

KEINAGHAM, MISS LIZZIE ..... Lexington, Ky.

KELLY, D. E ..... Knoxville, Tenn.
KENNEDY, RICHARD ..... Lexington, Ky.
KYLE, L. L ..... War Gap, Tenn.
KENNEDY, F. G ..... Lexington, Ky.
KNIGHT, F. E ..... Huntington, Ind.
KNIGHT, MISS MARY ..... Morgantown, Ind.
KNIGHT, CHARLES H ..... Morgantown, Ind.
KUHR, EDWARD ..... Lexington, Ky.

LANG, MISS LULA ..... Folkston, Ga.
LANCASTER, VIRGIL ..... Hinton, Ky.
LOWE, MISS EVA ..... Lowes, Ky.
LUCAS, W. P ..... Georgetown, Ky.
LOOKE, E. W ..... Lexington, Ky.
LUMAN, U. G ..... Mt. Carmel, Ky.
LOOMIS, E. K ..... Fiskburg, Ky.
LEWIS, JAMES H ..... Cut Shin, Ky.

MURRY, MISS B ..... Lexington, Ky.
MCCLURE, R. L ..... Mayfield, Ky.
MITCHELL, J. W ..... Buckeye, Ky.
MUNCASTER. W. A ..... Wilson's Store, Ky.
MOSS, GUY J ..... Lake Charles, La.
MURPHY, C ..... Lexington, Ky.
MURPHY, MIKE ..... Lexington, Ky.
METCALF, MISS E. H ..... Lexington, Ky.
MAY, C. B ..... Lexington, Ky.
MCMICHAEL, ALBERT ..... Lexington, Ky.
MCCAULEY, MISS L ..... Lexington, Ky.
MORTON, MISS S. P ..... Lexington, Ky.
MAHIN, H. M ..... Keene, Ky.
MARKS, L ..... Lexington, Ky.
MAY, H. S ..... Lexington, Ky.
MARRS, T ..... Lexington, Ky
MUNCY, J. F ..... Cumbow, Va.
MARKS, J. E ..... Georgetown, Ky.
MALONE, E. F ..... Memphis, Tenn.
MCLIN, J. B ..... Jackson, Ky.
MCDONALD, MISS M. A ..... Bowen, Ky.

OBERSHAIN, F. A ..... Morgantown, Ind.

RICHARDSON, B ..... Shelbyville, Ky.
RAMSEY, W. P ..... Craigville, Va.
RAGLAND, R. H ..... Lexington, Ky.
RAGLAND, L. H ..... Lexington, Ky
RIELLY, MISS MARY ..... Lexington, Ky.
RAWLINS, S. F ..... Hinton, Ky.

READ, E. A ..... Russellville, Ky
ROCHESTER, E. W ..... Stanford, Ky.
ROOT, A. D., JR. ..... Stanford, Ky.
REYNOLDS, R. L ..... Glasgow, Ky.

SHANNON, S. S ..... Goodlettsville, Tenn.
SCOTT, MISS S. G ..... Lexington, Ky.
SNIDER, G. H ..... Taylorsville, Ky.
SNYDER, WM. R., JR. ..... Lexington, Ky.
SHANNON, J. M ..... Lexington, Ky.
STRICKLER, PHIL. E ..... Lexington, Ky.
SMITH, MISS M. E ..... Mt. Sterling, Ky.
SMITH, MISS L V ..... Lexington, Ky.
STILES, L. S. ..... Harrison, O.
STRADER, GEORGE B ..... Lexington, Ky.
SHEKELL, W. H ..... Mt. Carmel, Ky.
SHEKELL, E. R ..... Mt. Carmel, Ky.
SAYERS, ROBERT ..... Salem, Va.
SEATON, MISS M. F ..... Lexington, Ky.
SWITZER, W. H ..... Switzer, Ky.
SELF, WM ..... Lexington, Ky.
SHELBY, MISS ALICE ..... Lexington, Ky.
SMITH, W. P ..... New Castle, Ky.
STEVENS, M ..... Sassafras, Va.
STILL, MISS ELLA ..... Lexington, Ky.
SMITH, HORNER ..... Paris, Ky.
STOCKWELL, J. R ..... Lexington, Ky.
SULLIVAN, FRANKLIN A ..... La Fayette, Ind.
SHOUSE, FORREST ..... North Middletown, Ky
SICKLES, W. L ..... Flemingsburg, Ky.
STUART, W. P ..... Chilesburg, Ky.
SIMMONS, C. C ..... Russellville, Ky.
SHEA, C. A ..... Middleburg, Ky.
SOSSAMAN, R ..... Huntersville, N. C.
SHIRLY, T. B ..... Mud Lick, Ky.
SLED, C. E ..... Mt. Sterling, Ky.
SWEENEY, MRS. CHRISTINE ..... Lebanon, O.
STILES, L. S ..... Harrison, Ky.

THURMAN, F. H. L ..... Charlottsville, O.
TILLEY, F. R ..... Lexington, Ky.
TAYLOR, C. J ..... Burnside, Ky.
TODD, O. K. ..... New Liberty, Ky.
THORNTON, J. W ..... Lexington, Ky.

VOORHEIS, C. H ..... Lexington, Ky.
VAN WINKLE, MRS. L ..... Frankfort, Ky.

WALKER, KENNER.....Lexington, Ky.
WOOLFOLK, M .....Lexington, Ky.
WRIGHT, J. S.....Elkton, Ky.
WALKER, W. A .....Lexington, Ky.
WILSON, MISS M. M .....Lexington, Ky.
WOODRUFF, F.....Athens, Ky.
WHARTON, B. A.....Lisbon, S. C.
WARREN, THOMAS .....Lexington, Ky.
WELLS, JOHN L.....Cartersville, Ky.
WILSON, L. B .....Lexington, Ky.
WHITEAKER, J. D .....West Liberty, Ky.
WEBB, WILLIAM .....Cordova, Ky.
WOODRUFF, T. B .....Lexington, Ky.
WIGGINTON, MRS. S. M .....Lexington, Ky.
WALKER, W.....Lexington, Ky.

COURSES OF STUDY.

AND

FACULTIES OF INSTRUCTION.

Agricultural, Scientific, Engineering, Classical, Normal School and Academic courses of study have been established under the instruction and management of the Faculties which follow. The courses of study required for the degrees conferred, with their distribution and hours of recitation, are also exhibited therewith.

AGRICULTURAL COURSE.

FACULTY OF INSTRUCTION.

J. K. PATTERSON, PH. D., PRESIDENT,
Professor of Civil History and Political Economy.

W. B. STARK, B. S., DEAN,
Professor of Botany and Professor of Agriculture.

JAS. G. WHITE, A. M.,
Professor of Mathematics and Astronomy.

*_____
Professor of Geology and Paleontology.

J. H. KASTLE, PH. D.
Professor of Chemistry.

H. GARMAN,
Professor of Zoology andEntomology.

JOHN SHACKLEFORD, A. M.,
Professor of English Language and Literature.

F. M. HELVETI, A. M.,
Professor of German and French Languages and Literature

J. W. PRYOR, M. D.,
Professor of Human and Comparative Anatomy and Physiology.

C. D. CLAY, 1ST LIEUT. U. S. A.,
Professor of Military Science.

*To be appointed.

COURSE OF STUDY AND HOURS OF RECITATION.

		9–10.	10–11	11–12.	12–1.	1–2.	2:30–4.
Freshman Year.	First Term.	English Literature.	Algebra.	German.	Physiology.	Military Science.	Shop Work and Drawing.
	Second Term.	English Literature.	Geometry	German.	Botany and Histology.	Military Science.	Shop Work and Horticultural Work.
Sophomore Year.	First Term.	Geometry, Trigonometry, and Surveying.	Drawing.	Chemistry.	Drainage, Dairying.	Military Science.	Shop Work.
	Second Term.	Analytical Geometry and Higher Algebra	Drawing.	Chemistry.	Fruit Orchards, Gardening.	Military Science.	Practical Surveying.
Junior Year.	First Term.	Stock Breeding, Feeding.	History.	Mechanics.	Zoology.	Military Science.	Agricultural Chemistry.
	Second Term.	Farm Economy Plant Diseases.	History and Political Economy.	Logic.		Military Science.	Agricultural Chemistry.
Senior Year.	First Term.	Geology.	Economic Entomology.	Fertilizers. Farm Crops.	Astronomy	Military Science.	Practical Surveying.
	Second Term.	Physics.	Water Supply	Moral Philosophy.	Astronomy	Military Science.	

SCIENTIFIC COURSE.

FACULTY OF INSTRUCTION.

J. K. PATTERSON, PH. D., PRESIDENT.
Professor of History and Metaphysics.

JAS. G. WHITE, A. M., DEAN,
Professor of Mathematics and Astronomy.

JOHN SHACKLEFORD, A. M.,
Professor of English Language and Literature.

J. H. KASTLE, PH. D.,
Professor of Chemistry.

F. M. HELVETI, A. M.,
Professor of French and German Languages and Literature

M. L. PENCE, M. S.,
Professor of Physics.

*_____

Professor of Geology and Paleontology.

W. B. STARK, B. S.,
Professor of Botany and Histology.

H. GARMAN,
Professor of Zoology and Entomology.

J. W. PRYOR, M. D.,
Professor of Human and Comparative Anatomy and Physiology

C. D. CLAY, 1st Lieut. U. S. A.
Professor of Military Science.

*To be Appointed.

COURSE OF STUDY AND HOURS OF RECITATION.

		9–10.	10–11.	11–12.	12–1.	1–2.	2:30–4.
FRESHMAN YEAR.	First Term.	English Literature.	Algebra.	German.	Physiology.	Military Science.	
	Second Term.	English Literature.	Geometry.	German.	Botany and Histology.	Military Science.	
SOPHOMORE YEAR.	First Term.	Geometry, Trigonometry and Surveying.	History of English Literature.	General Chemistry.	German.	Military Science.	
	Second Term	Analytical Geometry, Higher Algebra.	Rhetoric.	Organic Chemistry	German.	Military Science.	
JUNIOR YEAR.	First Term.	French.	History.	Mechanics.		Military Science.	Laboratory Work, Zoology.
	Second Term.	French.	History and Political Economy.	Logic.		Military Science.	Laboratory Work.
SENIOR YEAR.	First Term.	Geology.	French	Mental Philosophy.	Astronomy.	Military Science.	Laboratory Work.
	Second Term.	Physics.	French.	Moral Philosophy.	Astronomy, Mineralogy.	Military Science.	Microscopy.

CIVIL ENGINEERING COURSE.

FACULTY OF INSTRUCTION.

JAS. K. PATTERSON, PH. D., PRESIDENT,
Professor of History and Political Economy.

M. L. PENCE, M. S., DEAN.,
Professor of Civil Engineering

JAS. G. WHITE, A. M.,
Professor of Mathematics.

JOHN SHACKLEFORD, A. M.,
Professor of Englis Language and Literature.

J. H. KASTLE, PH. D.,
Professor of Chemistry.

F. M. HELVETI, A. M.,
Professor of French and German.

*_____

Professor of Geology, Paleontology.

W. B. STARK, B. S.,
Professor of Botany and Histology.

H. GARMAN,
Professor of Zoology and Entomology.

J. W. PRYOR, M. D.,
Professor of Human and Comparative Anatomy and Physiology.

C. D. CLAY, 1ST Lieut. U. S. A.,
Professor of Military Science.

*To be appointed.

COURSE OF STUDY AND HOURS OF RECITATION.

		9–10.	10–11.	11–12.	12–1.	1–2.	2:30–4.
FRESHMAN YEAR.	First Term.	English Literature.	Algebra.	German.	Physiology.	Military Science.	Drawing.
	Second Term	English Literature.	Geometry.	German.	Botany	Military Science.	Drawing.
SOPHOMORE YEAR.	First Term	Geometry, Trigonometry and Surveying.	Drawing.	General Chemistry.	German.	Military Science.	Shop Work.
	Second Term	Analytical Geometry and Higher Algebra.	Drawing.	Descriptive Geometry.	German.	Military Science.	Shop Work and Practical Surveying
JUNIOR YEAR.	First Term	Surveying.	History.	Mechanics.	Drawing.	Military Science.	Practical Surveying.
	Second Term	Physics.	History and Political Economy.	Calculus.	Civil & Road Engineering.	Military Science.	Practical Surveying.
SENIOR YEAR.	First Term	Geology.	Mechanics o Materials.	Railroad Engineering	Astronomy.	Military Science.	Graphic Statics and Designs.
	Second Term	Masonry Construction.	Water Supply and Sewerage.	Railroad Engineering	Thesis.	Military Science.	

CLASSICAL COURSE.

FACULTY OF INSTRUCTION.

JAS. K. PATTERSON, PH. D., PRESIDENT,
Professor History and Metaphysics.

JOHN H. NEVILLE, A. M., DEAN,
Professor Latin and Greek Languages and Literature.

JOHN SHACKLEFORD, A. M.,
Professor English Language and Literature.

JAS. G. WHITE, A. M.
Professor Mathematics and Astronomy.

J. H. KASTLE, PH. D.,
Professor Chemistry.

F. M. HELVETI, A. M.,
Professor of French and German Language and Literature.

*_____
Professor of Geology, Paleontology.

W. B. STARK, B. S.,
Professor of Botany and Histology.

H. GARMAN,
Professor of Zoology and Entomology.

J. W. PRYOR, M. D.,
Professor of Human and Comparative Anatomy and Physiology.

C. D. CLAY, 1st Lieut. U. S. A.,
Professor Military Science.

ROBERT L. BLANTON,
Instructor in Latin and Greek.

*To be Appointed.

COURSE OF STUDY AND HOURS OF RECITATION.

		9–10.	10–11.	11–12.	12–1.	1–2.
Freshman Year.	First Term.	English Literature.	Algebra.	German.	Cicero, Sallust	Military Science.
	Second Term.	English Literature.	Geometry.	German.	Livy.	Military Science.
Sophomore Year.	First Term.	Geometry, Trigonometry and Surveying.	History of English Literature.	Horace, Cicero de Senectute.	German.	Military Science.
	Second Term.	Analytical Geometry, Higher Algebra	Rhetoric.	Tacitus, Juvenal.	German.	Military Science.
Junior Year.	First Term.	Thucydides.	History.	General Chemistry.	Physiology.	Military Science. Zoology.
	Second Term.	Demosthenes Lysias	History and Political Economy.	Logic.	Botany.	Military Science.
Senior Year.	First Term.	Geology.	Euripides Æschylus	Mental Philosophy.	Astronomy.	Military Science.
	Second Term.	Physics.	Sophocles, Aristophanes.	Moral Philosophy.	Astronomy.	Military Science.

NORMAL COURSES.

FACULTY OF INSTRUCTION.

JAS. K. PATTERSON, PH. D., PRESIDENT,
Professor of History and Moral Philosophy.

RURIC N. ROARK, A. B., DEAN,
Professor of Pedagogy.

JOHN W. NEWMAN, B. S.,
Assistant in Normal Department.

*JAS. G. WHITE, A.M.,
Professor of Mathematics and Astronomy.

JOHN SHACKLEFORD, A. M.,
Professor of English Language and Literature.

JOHN H. NEVILLE, A. M.,
Professor of Latin and Greek.

J. H. KASTLE, PH. D.,
Professor of Chemistry.

*_____,
Professor of Geology and Paleontology.

M. L. PENCE, M. S.,
Professor of Physics.

W. B. STARK, B. S.,
Professor of Botany and Histology.

H. GARMAN,
Professor of Zoology and Entomology.

J. W. PRYOR, M. D.,
Professor of Anatomy and Physiology.

MRS. MARY C. ROARK, A. B.,
Assistant in Normal Department.

C. D. CLAY, 1st Lieut. U. S. A.,
Professor of Military Science.

*To be Appointed.

TEACHERS' REVIEW AND PREPARATORY COURSE.

See Page 43.

THE PROFESSIONAL COURSE.

		9–10.	10–11.	11–12.	12–1.	2:30–4.	DRILLS.
FIRST YEAR.	First Term.	Adanced Grammar, and English.	Latin.	Higher Arithmetic.	Physiology.		LiteraryExercises
	Second Term.	Rhetoric.	Algebra.	Higher Arithmetic.	Latin.		Debating.
SECOND YEAR.	First Term.	Geology.	Higher Algebra.	Chemistry.	Cæsar with Grammar.		Essays and Debating.
	Second Term	Pedagogy, *Educational Psychology.*	Geometry.	Higher Algebra.	Virgil.		Orations and Debating.
THIRD YEAR.	First Term.	Geometry and Trigonometry.	English Literature with Essays.	General History.	Pedagogy, *Management and Method.*	Laboratory Work.	Orations and Debating.
	Second Term.	Physics.	American Literature with Literary Analysis	Pedagogy, *History of Education.*	Botany.	Laboratory Work.	Parliamentary Law and Practice.

THE ACADEMY.

FACULTY OF INSTRUCTION.

PRINCIPAL;

W. K. PATTERSON.

ASSISTANTS;

J. LEWIS LOGAN, A. B.

J. MORTON DAVIS, A. B., B. S.

V. E. MUNCEY, B. S.

MRS. LUCY B. BLACKBURN.

COURSES OF STUDY IN THE ACADEMY.

ELEMENTARY COURSE.

		First Hour.	Second Hour.	Third Hour	Fourth Hour.	Fifth Hour.
	First Term.	Elementary History	Geography.	Arithmetic.	Elementary English Grammar.	
	Second Term.	Elementary History	Elementary Chemistry.	Arithmetic.	Elementary English Grammar.	

AGRICULTURAL, SCIENTIFIC AND ENGINEERING COURSES.

First Year	First Term.	Elementary Algebra.	Elementary Zoology.	Arithmetic.	Higher English Grammar.	
	Second Term.	Elementary Algebra.	Agriculture, Elementary Botany.	Arithmetic.	Higher English Grammar.	
Second Year.	First Term.	Elementary Physics.	Higher Arithmetic.	Higher Algebra.	Rhetoric.	
	Second Term.	Physical Geography.	Higher Arithmetic.	Higher Algebra.	Synonyms.	

CLASSICAL COURSE.

First Year.	First Term.	Elementary Algebra.	Greek Grammar.	Arithmetic.	Latin Grammar.	
	Second Term.	Elementary Algebra.	Greek Grammar.	Arithmetic.	Latin Grammar.	
Second Year.	First Term.	Elementary Physics.	Cæsar and Latin Grammar.	Higher Algebra.	Rhetoric	Xenophon's Anabasis, Homer's Iliad.
	Second Term.	Physical Geography.	Virgil and Latin Exercises.	Higher Algebra.	Synonyms.	Herodotus, Plato's Apology.

COURSES OF INSTRUCTION.

I. Agriculture and Horticulture.

PROFESSOR STARK.

FRESHMAN YEAR.

Second Term—Stock Breeds and Breeding; the Fruit Orchard.

SOPHOMORE YEAR.

First Term—Drainage and Dairying; Home and Market Gardens.

SENIOR YEAR.

First Term—Stock Feeding; Farm Crops and Fertilizers.
Second Term—Selection of Crops; Farm Economy.

II. Chemistry.

PROFESSOR KASTLE.

To enter the Sophomore class of this department students will be required to take a five months' course in Chemistry in the Academy of this College, or to pass a satisfactory examination on Roscoe's "Primer of Chemistry."

SOPHOMORE YEAR.

First Term—Elementary Chemistry; Lecture or Recitation daily;
Second Term—Organic Chemistry—the Chemistry of the Compounds of Carbon; Lecture or Recitation daily.

JUNIOR YEAR.

First Term—Agricultural Chemistry; Lecture or Recitation daily; Laboratory Work in Elementary Chemistry—two hours daily.
Second Term—Agricultural Chemistry continued. Laboratory Work continued into Qualitative Analysis.

SENIOR YEAR.

First Term—Laboratory Work—Quantitative Analysis.
Second Term—Laboratory Work and Thesis (optional).

III. Natural History.

PROFESSORS GARMAN, STARK AND PRYOR.

FRESHMAN YEAR.

First Term—Physiology (Scientific, Agricultural and Engineering Courses).

Second Term—Botany and Histology (Scientific and Engineering Courses).

SOPHOMORE YEAR.

Second Term—Botany and Zoology (Classical Course).

Second Term—Botany and Histology (Agricultural Course).

JUNIOR YEAR.

First Term—Physiology (Classical Course).

Second Term—Zoology (Scientific, Agricultural and Engineering Courses).

Second Term—Geology (Classical Course).

SENIOR YEAR

First Term—Geology (Scientific, Agricultural and Engineering Courses).

First Term—Meteorology (Agricultural Course).

Second Term—Microscopy (Scientific Course).

IV. Civil History.

PROFESSOR PATTERSON.

JUNIOR CLASS.

First Term—Fisher's Outlines of Universal History.

Second Term—Fisher's Outlines continued; Political Economy. Collateral Reading; Freeman's General Sketch of European History, Student's Rome, Student's Hume, Student's Gibbon, Student's France, Mills' Political Economy.

V. Mental and Moral Philosophy.

PROFESSOR PATTERSON.

SENIOR CLASS.

First Term—Metaphysics, Hamilton's Lectures.

Second Term—Metaphysics, Hamilton's Lectures; History of Philosophy, Ancient and Modern; Moral Philosophy.

VI. English.

PROFESSOR SHACKLEFORD.

SUB-FRESHMAN CLASS.

First Term—Quackenbos' Rhetoric, Exercises in Composition.
Second Term—Graham's Synonyms; March's Method of Philological Study of the English Language.

FRESHMAN CLASS.

First Term—Swinton's Studies in English Literature.
Second Term—Swinton's Studies in English Literature; Prosody; Exercises in Composition.

SOPHOMORE CLASS.

First Term—History of English Literature; Studies of English Classics.
Second Term—Whateley's Rhetoric; Minto's Manual of English Prose.

JUNIOR CLASS FOR THE SCIENTIFIC COURSE, SENIOR FOR THE CLASSICAL COURSE.

First Term—Sir Wm. Hamilton's Lectures on Logic.
Second Term—Carson's Anglo-Saxon and Early English (optional)

VII. Greek and Latin.

PRFESSOR NEVILLE.

GREEK.

FIRST YEAR IN ACADEMY.

First Term—Grammar, with a daily exercise in White's Lessons.
Second Term—Grammar; Exercises; Xenophon's Anabasis.

SECOND YEAR IN ACADEMY.

First Term—Xenophon's Anabasis; Homer's Iliad.
Second Term—Selections from Herodotus; Plato's Apology.

JUNIOR CLASS.

First Term—Thucydides; Exercises.
Second Term—Demosthenes; Lysias.

SENIOR CLASS.

First Term—Euripides; Æschylus.
Second Term—Sophocles; Aristophanes or Lyric Poets.

LATIN.

FIRST YEAR IN ACADEMY.

First Term—Grammar, with daily exercises in writing Latin.
Second Term—Grammar continued; Nepos.

SECOND YEAR IN ACADEMY.

First Term—Cæsar and Latin Grammar.
Second Term—Virgil and Latin Exercises.

FRESHMAN YEAR.

First Term—Cicero's Orations; Sallust.
Second Term—Livy; Exercises in writing Latin.

SENIOR YEAR.

First Term—Horace; Cicero de Senectute,
Second Term—Tacitus; Juvenal; Exercises.

VIII. German and French.

PROFESSOR HELVETI.

GERMAN.

FIRST YEAR.

First Term—German Lessons (Collar's Eysenbach), exercises in writing German.
Second Term—German Lessons (Collar's Eysenbach), Brandt's German Reader.

SECOND YEAR.

First Term—Grimm's Marchen; Schiller's Lied von der Glocke; Gœthe's Herman and Dorothea; Exercises and Conversation.
Second Term—G. Freytag's Die Journalisten; Schiller's Wallenstein (in part); Lessing's Minna von Barnhelm; Gœthe's Egmont.

THIRD YEAR (optional).

Hodges' A course in Scientific German; Lessing's Nathan der Weise; Gœthe's Iphigenie auf Tauris; Short course in History of German Literature.

FRENCH.

FIRST YEAR.

First Term—Ahn-Henn's French Method Part I.
Second Term—Ahn-Henn's French Method Part II. Super's Reader.

SECOND YEAR.

First Term—Keetel's Collegiate French Grammar; Le Conscrit de 1813; Dumas' La Tulipe Noire; G. Sand La Petit Fadette.

Second Term—Keetel's Collegiate Grammar (finished); H. Griville-Dosia—one or two modern French plays (Edition Lachette) Cinna (Corneille).

THIRD YEAR (optional)

French Composition; Classic French Plays.

IX. Mathematics and Astronomy.

PROFESSOR WHITE.

FRESHMAN CLASS.

First Term—Wentworth's Complete Algebra, chapters 16, 17, 18, 20, 21, 24, 27, 30.

Second Term—Wentworth's Geometry (new edition) to Book 6.

SOPHOMORE CLASS.

First Term—Wentworth's Geometry completed; Wentworth's Plane Trigonometry and Surveying.

Second Term—Peck's Analytical Geometry; Wentworth's Complete Algebra, chapters 31, 32, 33, 34; Field Work in Surveying.

JUNIOR CLASS. (Not required in Classical Course).

First Term—Peck's Mechanics.

SENIOR CLASS.

Both Terms—Young's General Astronomy.

X. Civil Engineering Course.

PROFESSOR PENCE.

FRESHMAN CLASS.

First Term—Drawing.
Second Term—Drawing.

SOPHOMORE CLASS.

First Term—Drawing.

Second Term—Drawing, Watson's Descriptive Geometry, Practical Surveying.

JUNIOR CLASS.

First Term—Johnson's Surveying, Drawing, Practical Surveying.
Second Term—Mahan's Civil Engineering, Practical Surveying.

SENIOR CLASS.

First Term—Merriman's Mechanics of Materials, Searles's Field Engineering, Greene's Graphic Statics.

Second Term—Baker's Masonry Construction, Fanning's Water Supply, Adams' Sewers and Drains for Populous Districts, Searles's Field Engineering.

XI. Normal Instruction.

PROFESSORS ROARK, NEWMAN, AND MRS. ROARK.

TEACHERS' REVIEW AND PREPARATORY COURSE.

First Term—Arithmetic, two grades, Algebra, Civics, Composition, Grammar, Geography, U. S. History, Physiology, Literary Drills.

Second Term—Arithmetic, three grades, Algebra, two grades, Civics, two ten weeks classes, Grammar, two ten weeks classes, Geography, two ten weeks classes, U. S. History, two ten weeks classes. Teachers' Training [Pedagogy], Debating Drills.

The above course can be completed in five or ten months, according to the advancement of the pupil at the time of entering. The student who completes this course of study will be able to obtain a first-class certificate in any County Examination, and will have had instruction in the latest and best methods of teaching. Applicants for admission must show satisfactory evidence of ability in Arithmetic, U. S. History and English Grammar.

THE PROFESSIONAL COURSE.

FIRST YEAR

First Term—Advanced Grammar and English, Higher Arithmetic, Latin Primer, Literary Drills.

Second Term—Rhetoric, Algebra, Higher Arithmetic, Latin, Debating Drills.

SECOND YEAR.

First Term—Higher Algebra, Cæsar, Essays and Debating.

Second Term—Pedagogy, (Educational Psychology), Higher Algebra, Orations and Debating Drills.

THIRD YEAR.

First Term—English Literature, with Essays, Pedagogy (Management and Method), General History, Orations and Debating.

Second Term—American Literature, with Literary A nalysis, Pedagogy (History of Education), Parliamentary Law.

XII. Military Art and Science.

LIEUTENANT CLAY, U. S. A.

I. PRACTICAL INSTRUCTION.

The practical instruction in this department will consist of drills of not more than an hour's duration for five days in each week. The cadets will be exercised and instructed during the year in the Infantry Tactics of the U. S. Army, comprising the School of the Soldier, the School of the Company, and the School of the Battalion, Guard Mounting, Dress Parade, Sentinel Duty, etc., in Artillery Tactics, comprising Manual of the Piece, Mechanical Maneuvers, and School of Battery Dismounted.

II. THEORETICAL INSTRUCTION

This will comprise recitation in Infantry and Artillery Tactics, portions of the U. S. Army Regulations and Elementary principles connected with the Art of War, to which will be added Lectures from time to time on Military Subjects.

All students are required to wear the prescribed uniform dress (the cost of which is about $20); and every student not physically disabled (a certificate of actual physical disability from the medical examiner appointed by the Faculty, issued to the applicant therefor upon actual examination, will be required to excuse from the prescribed drills and discipline) is required to attend the prescribed drills and other military training and discipline.

In addition to the importance of military science and training, considered in themselves, the habits of exactness and promptitude developed thereby, and the ease, grace and dignity resulting therefrom, can not be overestimated.

XIII. Practical Mechanics.

INSTRUCTOR J. C. OLIVER

Instruction in Practical Mechanics, based upon the sciences which relate to the mechanic arts, includes such elementary practice in the workshop as will enable the student to apply the principles of exper-

imental physics taught in the class-room, and familiarize him with the use of tools, machinery and mechanical processes. The course of instruction is based on what is known as the Russian System, now generally adopted in the Agricultural and Mechanical Colleges of this country. It embraces mechanical drawing, the study and care of tools, work in wood and metals at the bench, the lathe and the forge. This department will be under the care of one of the most skillful of practical mechanics.

XIV. Commercial and Short-Hand Department.

C. C. CALHOUN, PRINCIPAL.

No specified time is devoted to the studies in this department. Each pupil is advanced as rapidly as his ability and industry will allow.

BOOK-KEEPING COURSE.

Spelling, Arithmetic, Algebra, English Grammar, Composition, Penmanship, Book-keeping, Commercial Law.

SHORT-HAND COURSE.

Spelling, Penmanship, English Grammar, Rhetoric, Composition, History, Short-hand, Commercial Law.

Course also in Telegraphy and Type-writing.

DEPARTMENTS OF INSTRUCTION.

Department of Scientific Agriculture.

A distinctive agricultural course is one of the important features of the College; embracing instruction in matters relating to the farm, garden, fruit orchard, and diseases of domestic animals, and a thorough education in the Natural Sciences which relate to Agriculture, Organic and Inorganic Chemistry; Botany, Histology, Zoology, Geology and Meteorology. All of the work of the English Department contributes to the education of the students of this course. General Mathematics is given two and one-half years. Opportunity is also afforded to obtain a reading acquaintance with the German language.

The study of technical Agriculture occupies three years. To Chemistry two years are devoted; Natural History two and one-half; Mathematics three; English three; German one and one-half, and Drawing one year. To Moral Philosophy, Logic, Political Economy, Physics and Water Supply one term each is given.

Botany.—The elementary principles and classification are taught in the Academy, embracing a clear general idea of the structure and arrangement of vegetable organs and their functions, and the consideration of the habits, modes, and causes of growth of plants. Analysis of the local flora and other field work gives an intimate knowledge of the subject. Advanced Botany, in connection with Histology, is given to students of the second term of the Sophomore year, treating fully of Physiology, Morphology and Conditions of the Vegetable Kingdom.

Zoology—This is studied in the Academy and again during the second term of the Junior Year. The student learns by laboratory work of the organs and the arrangement of these organs into septums in the lower and higher orders of animals, the laws governing animal life and growth, and the essential conditions to be maintained for proper development. Human Physiology is

taught to students in the first term, Freshman. The object to be gained by the study of Botany and Zoology, is to bring the student into intimate contact with plant and animal life, that he may appreciate their laws and conditions imposed by Nature. The products of the farm are either animal or vegetable; therefore, to a thorough comprehension of farming the laws underlying plant and animal life are absolutely essential to the young farmer. A second object to be obtained by these studies is the cultivation of reasoning and sound judgment which these tend greatly to develop.

Chemistry.—This is taught in the Academy for five months, and is again taken by students of the Scientific Agricultural Course during the first term, Sophomore, being a study of the elementary principles upon which the science of Practical Chemistry is based. The composition of organic and inorganic bodies, and the theories of composition and analysis, are studied. Five months in Qualitative Analysis follows the above. Through the Junior Year, Chemistry, in its relations to Agriculture, is taught, including the assimilation of plant food and farm crops; the composition and adaptation of starches, fats, albuminoids, etc.; simple and compound rations for stock food; the economic principles of feeding and their applications; relations between crops and the soil; relations between soils and manure; cheapest form of manure for various crops; advantages of tillage; reasons for rotations, etc.

Mathematics.—In addition to a two years' course in the Academy, embracing Arithmetic and Elementary Algebra, a full Collegiate Course, consisting of Higher Algebra, Geometry, Trigonometry, Surveying, Analytical Geometry, Mechanics and Astronomy, is taught in the Agricultural Course.

English.—The elements are taught in the Academy during the first two and one-half years of the Agricultural Course. Composition, with exercises when practicable, is made an important feature. Two and one-half years are devoted to the study of this subject; the object being to give the student a command of language such that he may at all times express himself with force and clearness to those with whom he is brought in contact.

German.—Since much of the most important scientific work has been accomplished by German scientists, and it is desirable to obtain accounts of such work from original sources, it has been

deemed advisable to introduce the study of the German language into the Scientific Agricultural Course.

Veterinary Science,—Though not taught technically in the Department of Agriculture, has sufficient attention paid it during the Freshman Year to inform the student of the causes, symptoms and treatment of many diseases of horses and cattle.

The first term of the Junior Year is devoted to further instruction in this subject for students who desire to prosecute the subject farther. The Department of Veterinary Science is prepared with instruments, medicines and works by veterinary authorities to give assistance in clinical work when practicable. Should any student desire to pursue the work more than one term, he may do so; having the assistance of the instructor in directing his work, and the use of the chemical laboratory, instruments, etc., in following any particular division that he may wish.

Student Labor.—All students holding certificates as county appointees have the privilege of working upon the college farm during the afternoons and upon Saturdays, when such labor does not interfere with instruction in class room or field. The Agricultural Course has its studies so arranged that during the Freshman and first half of the Sophomore years students may work at both of the times above stated—afternoons and Saturdays—thus allowing opportunity for compensated and instructive labor to all students of this course. The choice of Agricultural or Horticultural labor is elective.

Library Facilities.—All of the works of reference necessary to free discussion of subjects under the heads of Farm, Garden Orchard and Veterinary, consisting of several hundred volumes, are at the disposal of students of this course, for investigation and study, extending through the Freshman and half of the Sophomore classes.

Agriculture.—Taught by text-book and lectures, having as means of illustration a farm, garden and green-house fully equipped and in active operation. All of the conclusive results of the State Experiment Station may be had for reference upon the subjects of Varieties, Cultivation, Rotations, Fertilizers and Drainage; experiments in which have been carried on for the past three years. As a location for the study of horses, cattle and fertile farms this insti-

tution presents advantages not to be obtained outside of the Blue Grass Region.

It is the object of the Agricultural Course, definitely, to bring the student to a full comprehension of the principles and laws governing the growth of crops; the elements of plant-food; the recuperation of worn-out soil; the intelligent use of fertilizers and barn-yard manure; stock breeds and breeding, and the diseases of stock; feeding animals, drainage, machinery, farm buildings, fences, roads and other matters of general farm economy.

Horticulture.—Instruction is divided into three branches of work; the Home, Market, and Fruit Gardens. Practical hints for the destruction of injurious insects to farm, garden and orchard are given. Cultivation, propagation, harvesting, rotation and shipping of all varieties of fruits and vegetables; landscape gardening, and construction of various styles of green-houses, is included in the work of the class.

Besides the foregoing regular course in Agriculture a popular course has been established, attendance upon which is obligatory by all male students in the College. It consists of a course of lectures on General and Agricultural Chemistry; on Chemistry, Botany, Zoology and Geology as related to Agriculture; on Farm Economy, including diseases of domestic animals; on Entomology; and on the uses of artificial fertilizers.

Department of Chemistry.

The course in Chemistry includes class-room work (lectures and recitations) in Elementary Chemistry; laboratory practice, including Qualitative and Quantitative Analysis; Organic Chemistry and Agricultural Chemistry.

Preparatory instruction in Chemistry is also given. This course forms a part of the first year's work in the Academy, and is intended to serve as an introduction to the Elementary and Agricultural Chemistry of the College Course. The aim of this course is to familiarize the student with a few of the most important elements and compounds, and to acquaint him with the simplest kinds of chemical action.

The course in Elementary Chemistry, extending over the first

term of the Sophomore year, consists of lectures and recitations on the principal chemical elements and their compounds, and the laws of chemical change. The lectures in the course will be abundantly ill ustrated by suitable and instructive experiments. The laboratory work of the first term of the Junior Year consists in repeating the most instructive experiments in Elementary Chemistry, and in gaining a general knowledge of chemical manipulation. The remainder of the time allotted to this work will be devoted to Qualitative and Quantitative Analysis.

Students who intend taking the S. B. degree will be expected to devote from eight to ten hours weekly to laboratory work. During the second term of the Sophomore year there are lectures and recitations five times weekly on the "Chemistry of the Compounds of Carbon." It is intended that this course shall serve as an introduction to one of the most important and interesting branches of Chemical Science, and especial attention will be given to its more important application to medicine and the useful arts.

For the benefit of students of Agriculture a special course in Agricultural Chemistry is given. This course consists of lectures and recitations five times weekly throughout the Junior Year, together with such laboratory practice and study of field-experiments as may be deemed necessary by the Instructor.

The general aim of this course is to acquaint the student with the chemistry of those elements which enter into the composition of Plants, and which are essential to their life and growth. A study of the composition of the soil, air and water, and their several relations to the plant as sources of plant-food, forms a large and important part of this work. Also the chemistry of tillage, irrigation and rotation, and the composition and value of commercial fertilizers and manures.

TEXT-BOOKS REQUIRED.

Roscoe's Primer of Chemistry.
Remsen's Elementary Chemistry (Briefer Course).
Remsen's "Chemistry of the Compounds of Carbon."
Johnson's "How Crops Feed."
Storer's Agriculture.
Stoddard's Qualitative Analysis.

Department of Physics.

ACADEMIC.

Daily Recitation and Lecture in General Physics illustrated by experiments. The course covers the elementary principles of natural philosophy as applied to the properties of matter, the simple elements of mechanics; acoustics, heat, light and electricity. Text-Book: Sidney A. Norton's Elements of Natural Philosophy.

COLLEGIATE.

Physics is here placed in the second term of the Junior Year, and being preceded by Mechanics and Chemistry, very thorough and good work can be done in a short time.

A rapid review of the general principles of Heat, Light and Electricity is first given, and then a systematic course on the subjects of Electrostatics and Electrodynamics, Electric Lighting, etc., on the Mechanical Theory of heat, on Mathematical Optics, and on the Undulatory Theory of Light. Text-Book: Atkinson's Ganot's Physics.

Department of Natural History.

Whatever course the student may elect, it will be seen by reference to the general table of studies that Natural History enters into all the courses to a greater or less degree, according to the particular need of the course taken. The work of the department is accomplished by bringing the student into immediate contact with nature, and by studying the animal, vegetable and mineral kingdoms from a personal stand-point. Original work is the plan adopted for all advanced students, and these are supplied with the necessary dissecting instruments, and simple and compound microscopes. Access is also given to the best scientific works, by standard authors, for use as hand-books and reference. The facilities for instruction in this department will be enlarged from time to time as opportunity offers, thus giving students the benefit of all recent scientific investigation and improved apparatus necessary to an intimate and thorough knowledge of the subjects considered.

It has been deemed advisable to adapt the instruction of the department to the particular line of work which the student pur-

sues: therefore it is necessary, in some cases, to provide two courses of instruction in a study—an Elementary Course which will cover the entire field in a general way, and a longer and more thorough course calculated to give a more intimate and technical knowledge of the subject under consideration.

Class Work.

Elementary Botany and Zoology.—Five months' work in the Academy is necessary to admit students into the college classes of any course. In these studies the student derives a clear idea of the parts of the Vegetable and Animal Economy; and the knowledge necessary to a proper classification of the various Families, Tribes, Genera, etc., of Plants and Animals.

Advanced Botany and Zoology.—In the Classical Course students have five months again given to them in the last half of the Sophomore Year. In the Scientific, Agricultural, and Engineering Courses a more minute and technical instruction is given in these two lines of work separately; consisting of Botany and Vegetable Histology in the second term, Sophomore, and advanced Zoology and animal Histology in the second term, Junior, thus giving a well arranged and Scientific study of Plant and Animal tissues, organs and their functions and systems.

Anatomy, Physiology and Hygiene—Are taught to students of the Scientific, Agricultural, and Engineering Courses during the first five months of the Freshman Year, and to classical students the first term of the Junior, giving a good knowledge of the structure of the human body and the laws of health, illustrated by skeletons and manikin.

Geology.—Students of the Classical Course take this study during the second term, Senior; students of other courses first term, Senior. The work consists of lectures and studies of the Geology of the region about Lexington, Frankfort, and the Kentucky river.

Microscopy—Has heretofore been taught in connection with Histology, but is now given one and one-half hours per day during the afternoons of the second term, Senior. It includes the history and the mechanism of the Microscope; lectures and instruction in its use and adjustments. Practical application thereof is made in

original investigation and study of the Physiology, Conditions and Habitats of Algæ, Fungi, Desmids, Bacteria, Micrococci, Bacilli, Vibriones, Spirillæ, etc.

Meteorology—Is taught to students of the Agricultural Course, explaining the phenomena of the atmosphere, such as rain-fall, snow, hail, winds and storms, auroral displays, atmospheric electricity, etc. The laws governing rain, evaporation and variations in hygroscopic moisture and soil water, are taught from text-book and lectures during the first term of the Senior Year.

Physical Geography.—Five months of one term are allotted to this in the Academy: In which are shown the intimate relations existing between Physics, Meteorology and Geology; the Movement of Tides, and the distribution of *Flora* and *Fauna*, etc.

Text-Books Used.—Physical Geography, Maury; Elementary Zoology, Packard; Elementary Botany, Gray; Anatomy, Physiology and Hygiene. Huxley and Youmans; Botany and Plant Physiology, Arthur, Banus and Coulter; Advanced Zoology, Packard; Geology, Dana; Microscopy, Carpenter.

Books of Reference.—Zoology, Holder; Outlines of Comparative Embryology, Packard; Anatomy of Vertebrate and Invertebrate Animals, Huxley; Practical Biology, Huxley and Martin; Corals and Coral Islands, Dana; Gray's Anatomy; The Earth as Modified by Human Agency, Marsh; Fresh Water Algæ of the U. S., Walle; Desmids of the U. S., Walle; Physiology of Plants, Sachs; Mosses of N. A., Lesquereux; Treasury of Botany, Lindley; Manual of Histology, Stowell; Bacteria and Yeast Fungi, Grave; Outlines of Classification and Special Morphology, Goebel; Reports of Kentucky Geological Survey; Text-book of Geology, Geike, etc.

Department of Civil History.

Various Forms of Government—Monarchy, Aristocracy, Democracy. Early History of Greece—Persian Wars, Athenian, Spartan and Theban Supremacies, Macedonian Supremacy and Conquests of Alexander. Early History of Rome—Period of the

Kings, Conquest of Italy, Carthagenian Wars, Expansion of the Roman Power, Roman Constitution, Fall of the Republic; the Empire, its greatness, decline and fall; the new Rome on the Bosphorus, Rise of the Saracenic Power, the Crusades; Rise and progress of the Frankish and German Monarchies, Feudal System, Development of the States-System of Modern Europe, Era of Spanish Ascendency, French Ascendency, Rise of Russia.

Celtic Britain, Saxon Britain, Norman Conquest; the Plantagenet Kings, Relations of Normandy to England and France, the Hundred Years' War and Wars of the Roses; Freedom of the Early English, Laws of Ethelbert, Ina, Alfred and the Confessor; Early English Charters, Magna Charta, Origin of Parliament and Growth of Free institutions; Social, Religious and Political Condition of the Early and Mediæval English; Feudalism in England and on the Continent; Accession of the Tudors, Age of Elizabeth, Reformation, Beginnings of Puritanism, Era of the Stuarts, the Puritan Rebellion, Protectorate, Restoration, Revolution of 1688; England, Holland and France; Age of Queen Anne, War of the Spanish Succession, Accession of the House of Hanover, War of the Austrain Succession and Seven Years' War; Colonial Epoch, French, Eglish and Spanish Colonial Dominions, Rivalry of France and England in Asia and America; Beginnings and Growth of British Empire in India; Revolt of the American Colonies, War of the Independence, Principles Underlying the Quarrel with the Mother Country, British Constitutionalism, Relation of the American to the British Constitution; Era of the French Revolution, French Republic, Consulate, Empire, Fall of Napoleon, Settlement of Europe by Treaty of Vienna; Course of Events in Europe and America since 1815; Development and Growth of Parliamentary Government in England, United States, France, Germany; Unification of Italy; Eastern Question, its Origin and Progress, Balance of Power; Commerce; Education; Naval and Military Armaments of Modern Times; Republicanism in the United States, Conditions of its Perpetuity, Influence of the American Republic upon European Politics; Literature of the English-speaking People, Probable Future of the English-speaking Stock.

Department of Political Economy and Moral Philosophy.

Text-Book.—Walker's Science of Wealth; distinction between money and wealth; elements of production; productive and unproductive labor; English view; French view, productive and unproductive consumption; capital; its origin; the criticism of its being the result of saving examined; propositions concerning capital; effect upon capital by governments becoming an agent of production; the Ricardian theory of rent considered in reference to American land tenure; the law of wages. Is there a wage fund? Views of Thornton and Francis A. Walker against such theory, and those of Catone and of John S. Mill, in his eariler writings, in favor of it; conditions which determine profits; remedies for low wages; strikes; nationalization of the land; history of the schemes; Communism in France, in the United States; Socialism in Germany, in England, in America. Is competition an evil? Money, its uses; the Ricardian law of International trade; obstructive legislation; Protection and Free Trade; relation of Political Economy to legislation, to philanthropy, to morals; method of Political Economy, is it inductive or deductive? Schools of; Classical and Bureaucratic; former shown to be more in harmony with the spirit and aims of American Institutions.

MORAL PHILOSOPHY.

Text-Book.—Janet's Theory of Morals, with reference to Elements of Morality by the same author. Moral Philosophy shown to be a derived science, and hence its underlying principles traced either to Psychology or to Metaphysics; the supreme principles of the good investigated; examination of the various principles brought forward as the true ground of right conduct; the different schools of Moral Philosophy, Ancient and Modern, passed in review. In connection with this last topic, the student is expected to read Mackintosh's History of the Progress of Moral Philosophy and Leckey's introduction to the History of European Morals. Practically; Moral Philosophy considered in its relation to the individual, to society, to law, to government; Moral Philosophy shown to be a progressive science in its development, application and influence; Buckle's view examined.

Department of English.

PREPARATORY FRESHMAN CLASS.

First Term—Rhetoric and Composition; Diction and Sentence Construction; Punctuation; Recitations and Exercises on the Blackboard.

Second Term—Narrative Composition; Written Essays read in class and corrected; Synonyms; Prosody.

FRESHMAN CLASS.

First Term—English Prose and Poetry; Interpretations of Masterpieces of English Prose and Poetry; Written Essays read in class and corrected.

Second Term—Studies in English Literature.

Each pupil is required to commit to memory and recite in class, selections from the great English poets and prose writers, including parts of Shakespeare's Julius Cæsar and the Merchant of Venice; Bacon's Essays on Studies and Friendship; Milton's L'Allegro and Il Penseroso, and extracts from the Areopogitica; Bunyan's Golden City; Dryden's Alexander's Feast; Gray's Elegy; parts of Goldsmith's Deserted Village; passages from Burke's Speech on the Spirit of Liberty in the American Colonies; Burns' Cotter's Saturday Night; Wordsworth's Intimations of Immortality; Coleridge's Hymn to Mont Blanc; the closing passages of Webster's speech in reply to Hayne; Byron's Prisoner of Chillon; Shelley's Ode to the Skylark; Bryant's Thanatopsis; Emerson's Essay on Compensation; Longfellow's Keramos; Holmes' Deacon's Masterpiece; Tennyson's Ulysses; De Finibus, by Thackeray; the Vision of Sir Launfal, by Lowell. Text-book: Swinton's Studies in English Literature.

SOPHOMORE CLASS.

First Term—History of English Literature; Class Readings from Bacon, Burke, Milton, Shakespeare and other great English writers. Text-books: Shaw's Manual of English Literature and Hudson's Annotated English Classics.

Second Term.—Advanced Rhetoric; Lectures on the Elements of Criticism. Text-books: Whateley's Rhetoric; Minto's Manual of English Prose Literature.

JUNIOR CLASS FOR THE SCIENTIFIC COURSE; SENIOR CLASS FOR THE CLASSICAL COURSE.

First Term.—The Science of Logic; Lectures on Pure Logic, in which Stoicheiology and Methodology are explained and illustrated; explanations and illustrations of the Analytics of Aristotle and the New Analytic of Sir Wm. Hamilton; exercises in Figure, Mood and Reduction; Lectures on Fallacies and the Sources of Error; Lectures on Inductive and Analogical Reasoning; Lectures on Evidence. Text-book: Sir William Hamilton's Lectures on Logic.

Second Term.—Anglo-Saxon and Early English. Text-book: Carson's Anglo-Saxon and Early English.

Department of Greek and Latin.

The distinguishing feature of this department is the method of teaching Latin and Greek grammar. The inflections, the idioms and the syntax are accurately and firmly impressed on the student's memory by incessant work on the blackboard during the whole of the first session. From the first to the last lesson one or more English sentences are given out daily from the book to each member of the class, and he is required to write his task in Latin or Greek, and then to write out fully all the inflections (in Greek with the accents). All the work is then carefully corrected by the teacher and instructions given on the lesson of the day, and often on that of the next.

The books used are Gildersleeve's Latin Primmer and Goodwin's Greek Grammar with White's Lessons.

The course and the amount of reading in the Latin and Greek authors varies from year to year, according to the capacity of the students or the pleasure of the professor.

Department of German and French.

In the Department of Modern Languages it will be the chief aim to impart a fair, scientific knowledge of the languages taught,

together with such oral practice as to enable the student, at the end of the prescribed time of study, to express himself with some facility, read easy French or German at sight, and at the same time have a sound foundation laid for more thorough study in the future if his tastes and pursuits lead to it. It will be the aim to insure a correct pronunciation and familiarity with general rather than special rules.

For those who may wish to pursue the study of German or French beyond the prescribed course, classes will be arranged to introduce them to the history of the literatures of these languages, together with selected readings to illustrate the same.

Department of Mathematics and Astronomy.

FRESHMAN.—Text-books: Wentworth's Complete Algebra, Wentworth's Plane and Solid Geometry (New Edition). A thorough knowledge of Arithmetic and Algebra through equations of the second degree is required for admission into this class. The first five months of the session is occupied in studying the Algebra, beginning with chapter XVI. The remainder of the session is devoted to the study of the first five books of Geometry.

SOPOHMORE.—Text-books: Wentworth's Plane and Solid Geometry. Wentworth's Plane Trigonometry and Surveying, Peck's Analytical Geometry, Wentworth's Complete Algebra. The first five months are occupied in completing Geometry, beginning with book VI, and in the study of Plane Trigonometry and surveying. The second term is devoted to the study of Analytical Geometry, Higher Algebra, and to field work in Surveying.

Abundant facilities for field practice, with a full set of surveyor's instruments, are furnished to all who desire to learn the practice as well as the theory of Surveying.

JUNIOR.—(Not required in Classical Course.) Text-book: Peck's Mechanics. The work for this year is limited to the first term. Following, as it does, a course in pure Mathematics, it is designed to give to the student a fair acquaintance with the mathematical principles of Mechanics of Solids.

SENIOR.—Text-book: Young's General Astronomy. The ob-

ject of this class is to give to the students a knowledge, as accurate and as extensive as our time will permit, of the phenomena of the heavenly bodies and of their probable condition and history. No efforts will be spared to make the study of this branch of science highly interesting and instructive. The whole of the first term and a portion of the second will be devoted to this subject.

Department of Civil Engineering.

The work of this department is arranged especially to utilize to the best advantage the facilities for instruction, and the time and the ability of the students, and to give them sound training in the sciences and the principles which underlie the practice of civil engineering. The instruction is both theoretical and practical. The presentation of every principle in theory is with special reference to its application in practice. The work is briefly outlined in what follows.

DRAWING.—Instruction during the first and second years embraces free-hand drawing, the use of instruments and instrumental drawing, lettering, projections of objects, plans, elevations and sections, intersections of solids and of surfaces, the development of surfaces, grading, tinting, etc. The course in descriptive geometry extends through the second term of the sophomore year, one hour daily being given to the work of instruction and recitations.

The work of the third year includes topographical drawing, shades and shadows, perspective and isometrical drawing, and work from models and from blue prints. The students draw maps from field-work executed by themselves.

The work of the fourth year comprises the elements of stone-cutting, graphic statics, and the designing of engineering structures.

SURVEYING.—The theory of surveying is begun during the first term of the sophomore year. This is followed by a very full course in advanced surveying extending through the first term of the junior year.

Great importance is attached to practical surveying, which is begun during the second term of the sophomore year, and is continued one hour and a half daily, when the weather allows, through

the entire junior year. Railroad surveying extends throughout the senior year.

The following are some of the practical exercises required of each squad of students:

1. Exercises in pacing.
2. Survey of a field by pacing, and calculation of area.
3. Use of pedometer and odometer.
4. Exercises in chaining, including construction of angles, fixing the direction of lines, and overcoming obstacles to measurement.
5. Survey of a farm by the chain alone, and calculation of area, with plat.
6. Survey of a farm with chain and compass, including location of fences, roads, buildings, etc., and calculation of area, with plat.
7. Exercises in land division.
8. Exercises with the hand level, and with the wye level.
9. Exercises with the transit.
10. Triangulation survey.
11. Traversing.
12. Topographical survey with transit and stadia, with map.
13. Topographical survey with plane-table.
14. City surveying with exercises in laying out streets and lots.
15. Railroad survey with transit and level, comprising preliminary work, location, grade, tangents, curves, calculation of earthwork, construction, etc.

Civil Engineering.—The instruction, mainly in the fourth year, embraces engineering materials and their properties, qualities, modes of preparation and uses,—natural and artifical stone, brick, limes, cements, mortars, concrete, wood, iron, steel, etc., and their strength under tension, compression, shear, torsion; excavations, quarrying, drilling, blasting, explosives, stone cutting; foundations above and under water, piles, grillage, caisson; stone and brick masonry; strength and stability of masonry dams, retaining walls, bridge abutments, bridge piers, culverts, arches; strength of pipes, cylinders, and riveted joints; strength of cantilever, simple, restrained and continuous beams, with uniform or varying load; beams of uniform strength; strength

of columns and shafts; limit of elasticity; equation of elastic curve; combined stresses; methods of determining strains; designing the structure and proportioning its different parts; engineering specifications. The students in civil engineering also receive instruction in water-supply and sewerage and drainage as shown under the two heads which immediately follow.

Hydraulic Engineering.—Quantity of water required, sources of water, storage and evaporation, supplying capacity of watersheds, impurities of water; weight and pressure of water, flow through orifices, through short tubes, through pipes, and in open channels, measuring weirs and weir gauging; reservoir embankments and chambers, open canals, waste weirs, partitions and retaining walls, conduits, mains and distribution pipes, distribution systems, clarification of water, pumping, stand-pipes, systems of water supply.

Sanitary Engineering.—Systems of removal and disposal of sewage, preparation of sewerage plans, dimensions and shapes of mains and branches, materials and methods of construction, appendages, ventilation, and house-drainage.

At present the following text-books are used:

Binn's Orthographic Projections.
Watson's Descriptive Geometry.
Warren's Shades, Shadows and Perspective.
Johnson's Theory and Practice of Surveying
Searles's Field Engineering.
Mahan's Civil Engineering.
Greene's Graphical Statics.
Merriman's Mechanics of Materials.
Baker's Masonry Construction.
Fanning's Water-Supply Engineering.
Adams's Sewers and Drains for Populous Districts.

The Normal Department.

The Teacher must be possessed of three things, in addition to an upright and sterling character, and a healthy body. These three things are (1), An adequate knowledge of what he proposes to teach; (2), Skill in teaching,—knowledge of how to teach; (3),

Some broad and liberal culture, wherewith to illuminate his work and increase its value. These three things it is the business of the Teachers' Training School to give.

1. *An adequate knowledge of the branches to be taught.*—The giving of this knowledge is academic work, primarily. But this academic instruction is given with the fact constantly in view that "The student will teach as he is taught rather than as he is taught to teach." The instruction in Arithmetic, Physiology, Grammar, etc., etc., is designed to illustrate to the teacher-pupils in the various classes the latest and best methods of teaching these subjects.

As will be seen from the schedule on page 35 ten weeks review classes in the Common Branches will be maintained. By this arrangement, Teachers who want a thorough review in the branches of the Common School course can take them all in a five months' term. Those pupils who have had no experience in teaching, or have not been over these branches one or more times, will be classified in the five months classes.

2. *Skill in Teaching,—the Knowledge how to Teach.*—This can be acquired best by successful practice; but there is a Science as well as an Art of Teaching. Teaching must not be wholly empirical There are fundamental principles upon which all true teaching rests, and the purpose here is to fix these principles in the minds of the pupils It is the carrying out of these principles, their successful and practical application, that lifts the work of the Teacher to the dignity of a profession. It is the direct inculcation of these principles and the practical drill in their application that distinguish the Teachers' Training School from all other schools. The Teachers' Training School should work in the faith that teaching is the highest profession, and the atmosphere of such a school should be filled with the professional spirit.

Since the principles of the Science of Education rest on the activities and processes of the growing mind, special attention is given to Educational Psychology. A study of this subject is followed by a thorough drill in School Management and the most rational and effective Educational Methods. The principles of Management and Methods are constantly presented in their relations to the principles of Psychology. Finally, the student-teacher is introduced to the History of his profession abroad

and at home. The Professional Course proper, then, consists in Educational Psychology; Management in Education; Method in Education; and the History of Education.

3. *Some Broad and Liberal Culture.*—He who knows only the subjects he has to teach and something of how to teach them is not yet a Teacher. He must know as much more as he can; must have some knowledge of subjects higher than anything he will be called on to teach, and different from them. Human knowledge is so interrelated that otherwise he cannot have the copiousness of illustration necessary to make the simplest and commonest facts as clear as they should be. The relations of facts must be taught,—hence the growing need of liberal culture, a widened horizon, for the Teacher.

THE LIBRARY.

One of the best means of affording this broader learning is to introduce the pupils to other books than the text-books. Subjects, not text-books, should be taught. In this view, a Library is indispensable The Normal Department has the nucleus of an excellent collection of books, on general and special subjects, which is constantly being added to, and will soon assume proportions suitable to the needs of a growing school. The work in the various classes is so arranged that the pupils are led to make daily use of the Library.

THE COURSES.

The Courses offered are believed to be such as to meet the practical needs of the educational system of the State.

The Teachers' Review and *Preparatory Course* prepares those who complete it successfully to stand any County examination, and secure a first-class certificate.

The Professional Course, leading to the Degree of *Ped. B.*, (Bachelor of Pedagogy), is intended to cultivate the professional spirit, to give a general education, and to fully equip those who complete it for teaching successfully in any grade of public school.

Those who complete the Professional Course are recommended to take, at some time, one of the advanced College Courses.

TEXT-BOOKS.

The texts are selected solely with reference to their utility for giving the pupil the best introduction to the various subjects

Pupils will do well to bring with them all the standard text-books they have. The Normal plan is to use the best parts of as many books as possible

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The Academy.

The Academy is under the immediate direction and management of a Principal and four Assistants, all of whom are teachers by profession, and who have had years of experience as successful educators.

The pupils are subject to the same rules and regulations as the students of the College. Their attendance at the College is required only during the hours of recitation and other prescribed College exercises, such as chapel, drill, etc., the preparation of their lessons being made elsewhere.

The courses of instruction in the Academy are provided for those who enter directly from the common schools, and are intended to supply the necessary training intermediate between the course of study prescribed by the State Board of Education for the common schools and the Freshman Class of the College.

Applicants for admission to the Academy, if county appointees, must be, at least, twelve years of age, and must be provided with credentials of scholarship from their County Board of examination. They must also pass a satisfactory examination in spelling, reading, writing, arithmetic (as far as percentage), English grammar through syntax, and geography, in order to be admitted.

Other applicants must be at least fourteen years of age, and must have completed the common school course prescribed by the State Board of Education. They must also pass a satisfactory examination in spelling, reading, writing, arithmetic, English grammar through syntax, and geography, in order to be admitted. Applicants from the city must present certificates that they have completed the course of study prescribed for the city schools. Those who enter at any other time than the beginning of the year will be required to pass a satisfactory examination on the work already gone over by the classes which they propose to enter.

Students matriculated in the Academy will be required to pursue one of its prescribed courses of study, and will not be per-

mitted to take any work outside of this course except on the rcommendation of the Principal.

COURSES OF STUDY.

I. SCIENTIFIC AND AGRICTLTURAL COURSE.

First Year.—Arithmetic, beginning at percentage, Robinson's Practical; Algebra, Robinson's Elementary; Elementary Chemistry, Remson; Elementary Zoology, Packard; Elementary Botany, Gray; Elementary Agriculture; Advanced English Grammar, Patterson.

Second Year.—Arithmetic, Robinson's Higher; Algebra, through Quadratic Equations, Wentworth's complete; Elementary Physics, Peck's Ganot; Physical Geography, Maury; Rhetoric, Quackenbos; Synonyms, Graham.

II. CLASSICAL COURSE.

First Year.—Latin Primer, Gildersleeve; Greek Grammar, Goodwin, White's First Lessons; Arithmetic, beginning at percentage, Robinson's Practical; Algebra, Robinson's Elementary; Advanced English Grammar, Patterson.

Second Year.—Latin Primer (continued), Cæsar, Virgil and Latin Exercises; Greek Grammar (continued), Xenophon's Anabasis, Homer's Iliad; Algebra (through Quadratic Equations), Wentworth's Complete; Physical Geography, Maury; Rhetoric, Quackenbos; Synonyms, Graham.

EXAMINATION QUESTIONS.

For the benefit of those who expect to enter the State College and who desire to know the character of the examination which applicants for admission will be required to pass, the following examination papers are submitted as a sample. It is not to be understood that the pupil will be examined *on these questions*, but that they are a specimen of what he will be expected to do in order to enter the academy of the College. Those who expect to enter more advanced classes will be required to pass an examination on all that the class which they propose to enter has passed over.

ENTRANCE EXAMINATIONS.

I. ARITHMETIC.

Find the greatest common divisor and the least common multiple of 899 and 961.

Simplify $2\frac{1}{4} \times \frac{10\frac{3}{4} - 4\frac{1}{12}}{6\frac{3}{16} \div 7\frac{2}{3}} \div \frac{3\frac{5}{11}}{1\frac{2}{5} \times 9\frac{1}{11}}$.

Find the number of bushels that will fill a bin 8.5 feet long, 4.5 feet wide, 3.5 feet deep.

The longitude of Rome is 12° 27′ 14″ east; the longitude of Chicago is 87° 35′ west; find the difference of time between the two places.

What will be the cost of plastering the walls and ceiling of a room 27 feet 4 inches long, 20 feet wide, and 12 feet 6 inches high, at 27 cents per square yard, if 20 square yards be deducted for doors, windows and base-board?

If a train, at the rate of $\frac{5}{13}$ of a mile per minute, take $3\frac{1}{4}$ hours to reach a station, how long will it take at the rate of $\frac{7}{15}$ of a mile per minute?

A and B can do a piece of work in $2\frac{1}{2}$ days, A and C in $3\frac{1}{3}$ days, B and C in $4\frac{1}{4}$. Required the time in which all three, working together, can do the work, and in which each can do the work alone.

A farmer sowed 5 bushels, 1 peck, 1 quart of seed, and harvested from it 103 bushels, 3 pecks, 5 quarts. How much did he raise from a bushel of seed?

Reduce 9 square chains, 11.25 square rods to the decimal of an acre.

If a bar of iron $3\frac{1}{3}$ feet long, 3 inches wide, $2\frac{3}{4}$ inches thick, weigh 93 pounds; what will be the weight of a bar $3\frac{2}{3}$ feet long, 4 inches wide, and $2\frac{1}{2}$ inches thick?

II. ENGLISH GRAMMAR.

Give illustrations of all the parts of speech.

Define pronoun, preposition, adverb, clause and phrase.

How are the possessive cases of nouns and pronouns formed?

Analyze the following sentence and parse in full all the words in it:

"The soldiers of the tenth legion, wearied by their long march, and exhausted from want of food, were unable to resist the onset of the enemy."

III. GEOGRAPHY.

What are the circles of the earth?

What are the meridians?

Define latitude and longitude.

What two meridians bounds the hemispheres?

Define the two principal forms of government.

Bound North America and describe its political divisions.

Why is the climate of Western Europe different from that of America in similar latitudes?

Describe the mountains, principal rivers and lakes of Asia.

Describe the natural routes of commerce.

Commercial and Phonographic Department.

FACULTY OF INSTRUCTION.

C. C. CALHOUN, Principal.

SHERMAN W. FERRIS,
M. E. MILLIKAN,
W. H. BERRYMAN,
R. L. REYNOLDS,
} Assistants.

C. D. CLAY, 1st Lieut. U. S. A., Professor of Military Science.

This Department is self-sustaining, depending upon its tuition fees for its maintenance; but the College has made arrangements with Professor Calhoun to give instruction without extra charge to all matriculates of the State College who desire to add book-keeping to the other courses of study provided by the College.

Those students who matriculate in the Commercial, Short-hand and Telegraphy Department will pay the fees charged by that De-

partment for its several courses of study. All such students may have access to any of the classes in any of the other Departments of the College upon payment of two-thirds of the fees charged by the College, and conversely, all matriculates of the College may have access to the classes of Phonography, Type-writing, Telegraphy and Penmanship in the Commercial, Short-hand and Telegraphy Department upon payment of two-thirds of the regular fees charged by that Department.

All the matriculates of this Department are subject to the regulations of the College.

Professor Calhoun, with his corps of efficient teachers, who have had practical experience in their lines of work, is able to give the very best training in theory and practice.

The importance of a thorough course of training for those who intend to apply themselves to business pursuits can not be overestimated. Practice alone does not suffice. The physician who betakes himself to the healing art without a previous knowledge of Anatomy and Physiology, and the Surveyor who attempts to compute areas and determine boundaries without a knowledge of Trigonometry, are on a par with the merely practical book-keeper. A rational art of book-keeping must be based upon a knowledge of the principles which make book-keeping possible. To provide the pupil with an adequate knowledge of scientific principles as well as their application to the keeping of accounts, the Department, whose announcement is now made, desires to address itself.

Phonography and Type-writing are included in this Department. The constantly increasing demand for short-hand in reporting speeches, sermons and the proceedings of public deliberative bodies, in recording evidence given in court, and in the correspondence of business firms, is one of the most marked characteristics of the day. The effectiveness of Phonography has been largely increased by the type-writer, which greatly lessens the labor of transcribing the short-hand notes of the reporter. For these indispensable auxiliaries of a good commercial education, this Department is prepared to provide every facility required.

The numerous demands for Telegraph Operators has rendered it necessary that Telegraphy should be added to this department, and accordingly it has been well equipped with all modern telegraph instruments of the best make. The students are drilled in

handling telegraph business, both railroad and commercial. We have all the standard forms in use on all the best railroads, and the the students' daily practice is such as to familiarize them with all the duties of a telegraph operator or agent.

The Department is also provided with a main line of nearly two miles in length, over which considerable practical work is done. This department has every facility necessary for giving a thorough and practical training.

LECTURES ON COMMERCIAL LAW.

A special course on commercial law has been arranged for and will be delivered on Saturdays. This course of lectures alone is worth the price of a scholarship to any young man or woman. These lectures are free to all students of all Departments of the State College who pursue the studies recommended by the lecturer. Others not pupils of the State College can have the benefit of them by the payment of five dollars for the entire course.

DIPLOMAS.

All graduates in the entire course of study are entitled to and receive a full course diploma, signed by the President of the State College and the Governor of the Commonwealth.

FEES.

Complete course in book-keeping; embracing merchants, partnership, compound company, commission, joint stock, banking, lumber, cotton, mining and Commercial Law $40.

Complete course in short-hand, spelling, punctuation, etc., scholarship, $40, type-writing, $10.

Complete course in plain and ornamental penmanship, unlimited as to time, $8.

Complete course in telegraphy, $35.

For further information in regard to this Department, send for special catalogue, or address Professor C. C. Calhoun, Box 97.

GENERAL INFORMATION.

Conditions of Admission.

Applicants for admission into the Freshman Class in any of the courses of study, Agriculture, Scientific, Engineering or Classical, will be required to pass an examination on the Academic Course.

New students must present themselves for examination and matriculation on the Monday preceding the beginning of the fall term. No one is admitted to tuition until *all his fees are paid.*

Applicants for admission into the Normal or Commercial Departments must be prepared to stand an examination in English Grammar, Arithmetic and Geography. *Normal students who receive free tuition will be required, on entering, to sign an obligation to teach within the limits of Kentucky for a period as long as that during which they receive free tuition.*

DEGREES.

The degrees conferred are Bachelor of Agriculture (B. Agr.), Bachelor of Science (B. S.), Bachelor of Arts (B. A.), Bachelor of Pedagogy (Ped. B.), Civil Engineer (C. E.), Master of Agriculture (M. Agr.), Master of Science (M. S.), Master of Arts (M. A.).

For the degrees of B. Agr., B. S., B. A., Ped. B., and C. E. an actual membership of at least one year in this College is required, and a satisfactory examination on the *entire course* of study.

For the degrees of M. Agr., M. S., and M. A., a satisfactory examination is required on a course of post-graduate studies prescribed by the Faculty, and covering a period of two years.

To those who do not complete the entire Agricultural, Scientific, Classical Course or Engineering Course, but only certain parts thereof, certificates of proficiency may be given for those departments of study completed.

No degrees are conferred upon graduates in the Commercial

Department; but diplomas are given to those who complete the course of study embraced therein.

FEES.

Tuition for the year	$15 00
Matriculation	5 00
Total fees	$20 00

Those who occupy rooms in the dormitory pay $6.50 each (yearly) for the use of a room and its furniture. A standing deposit of $5 is required from each student, which deposit is refunded when his connection with the College is terminated, less the amount which may be assessed against him for damages done to the buildings, furniture or premises. All damages, injuries, defacements etc., which rooms and furniture in the dormitory sustain during occupancy, will be charged to the occupants thereof. All injuries, damages, defacements, etc., which the halls and dining-room sustain, will, unless specifically traced, be charged to the occupants of the respective sections collectively.

LOCATION.

The Agricultural and Mechanical College of Kentucky is established on the old City Park grounds of the city of Lexington, given to the Commonwealth for this purpose. The site is elevated, and commands a good view of the city and surrounding country. A new College building has been erected, containing commodious chapel, society rooms, lecture and recitation rooms sufficient for the accommodation of 600 students. Two large and well ventilated dormitories have also been built, with rooms for one hundred and forty students, for the use of the appointees sent by the Legislative Representative Districts of the State to the *agricultural, engineering, scientific or classical* departments of the College, and containing suitable dining-rooms, kitchens and servants' rooms.

Lexington is now the most important railroad center in Kentucky, being in immediate communication with Louisville, Cincinnati, Maysville, Chattanooga, and with more than seventy counties in the Commonwealth. The long established reputation of the city for refinement and culture renders it attractive as a seat of learning, and the large body of fertile country adjacent, known as

the "Blue-Grass Region," with its splendid stock farms, affords unsurpassed advantages to the student of agriculture who desires to make himself familiar with the best breeds of horses, cattle, sheep and swine in America.

BOARDING.

For the accomodation of students sent by the Board of Examiners appointed by the Court of Claims, as beneficiaries of Legislative Representative Districts of the State, rooms for one hundred and forty students are provided in the dormitories. To these good substantial board is furnished at $2 per week: payable weekly in advance. But no student under seventeen years of age will be permitted to room in the dormitories, unless all of his classes shall be in the regular Collegiate Courses. Good boarding, with fuel, lights and furnished room, can be obtained in private families at rates varying from $3.50 to $4 per week.

The students who board in the domitories are, for business purposes, organized at the beginning of the collegiate year under a Chairman and Secretary of their own choice, whose successors are elected on the first Tuesday of each term, and who serve for one term. At the business meeting held on Tuesday night of each week, the weekly dues, $2, are paid. The Boarding Department is managed by a Board consisting of the President of the College, the Commandant, the Treasuer, who is a member of the Faculty and into whose hands all the weekly dues are placed when collected, the Steward and the Chairman and Secretary selected by the students. It will thus be seen that the Boarding Department has no official connection with the College authorities. The College, as such, does not board the students, and is in no sense responsible for any debts created by the Boarding Department. Two members of the Faculty, in their individual capacity, assist in the management of its funds.

EXPENSES.

The necessary expenses of a student while at College need not exceed the following estimates. As a rule, the less pocket money allowed by parents or guardians, the better it is for the pupil. When supplies of pocket money are kept short, the opportunity for contracting vicious habits is correspondingly diminished. Stu-

dents should not be allowed by their parents to create any debts. All moneys intended for the use of the students should be deposited with the Commandant.

For county appointees occupying a room in the dormitory and boarding in the common mess, the necessary expenses are as follows:

Tuition	$ 0 00
Use of room and furniture	6 50
Matriculation	5 00
Fuel and gas	8 00
Cost of furnishing room, about	10 00
Washing	10 00
Board, 38 weeks, at $2 per week	76 00
Books, about	10 00
Total	$125 50

Each room must be provided by each occupant thereof, *at his own expense*, with a good mattress, three comforts or blankets, one pillow, three pillow slips, four sheets, looking-glass, blacking brush, hair brush, clothes broom or brush; some of these articles may be brought from home by the student.

For students who are not supplied with appointments from the Legislative Representative Districts of the Commonwealth, and who board in private families, the necessary expenses will be as follows:

Tuition fee	$15 00		
Matriculation fee	5 00		
Board and lodging, 38 weeks, at $3.50 to $4 per week	133 00	to	$152 00
Washing	10 00		
Books and stationery	10 00		
Total	$173 00	to	$192 00

BENEFICIARIES.

Each Legislative Representative District is allowed to send, on competitive examination, *one properly prepared student* each year, between the ages of twelve and twenty-five, to this College, free of tuition charge. Said students shall be selected as follows: First. The trustees and teacher of each common school taught within said Representative District shall select and send before an

Examining Board appointed by the Court of Claims *one* pupil in the school managed and taught by them. Second. Any other person resident within the Representative District, and within the required limits as to age, may present himself to the Examining Board appointed by the Court of Claims as a candidate for selection; and from these persons so appearing, viz: from the pupils sent before the said Examining Board by the trustees and teachers of common schools, and from such persons within the specified age as voluntarily present themselves, the Examining Board appointed by the Court of Claims shall select one student, and properly certify to his selection, who shall be entitled to remain at the College four years, or until the course of study for which he matriculates shall have been completed. Preference in such selection and appointment shall be given to energetic, moral young men, whose means are not large, to aid whom in obtaining a good education this provision is specially intended. Properly prepared students, under the meaning of the acts of the Legislature of which the foregoing is a summary, are those who can pass a satisfactory examination in Spelling, Reading, Writing, Arithmetic as far as percentage, Geography and English Grammar, and who are between the ages of twelve and twenty-five years.

All teachers or persons preparing to teach, male or female, are admitted free of tuition charge for one year, at the rate of not more than four, at the discretion of the Board of Trustees, for each Legislative Representative District. All the classes in the College are open, without extra fees, to students who matriculate in the Normal Department.

COMPENSATED AND UNCOMPENSATED LABOR.

The work necessary for carrying on the Agricultural and Horticultural operations of the College is done by the students in those departments, and is paid for at rates varying from six to ten cents per hour. Its design is two-fold; to put in practice the instruction received in the class-room, and to assist indigent students. The experience of this College is that of Agricultural Colleges generally —that compensated labor is not remunerative to the College.

The College holds itself under no obligation to furnish compensated labor to any students except those who enter as county appointees.

Students are paid weekly for the services rendered, and apply the money as they see proper.

No student, however, should come to this College expecting to maintain himself exclusively by compensated labor. At least seventy-five dollars per annum, exclusive of his earnings while here, should be at the command of every student who wishes to avail himself of the advatages of the compensated labor system.

No compensation is given to students in the Department of Practical Mechanics, inasmuch as no pecuniary returns are possible to the College from this Department as at present organized.

CERTIFICATES OF CHARACTER.

All applicants for admission into any class in the College or Academy must bring satisfactory testimonials of good moral character.

REGULATIONS, GENERAL AND SPECIAL.

The following paragraphs, selected from the published "Regulations," are added for the benefit of intending matriculates:

ADMISSION OF STUDENTS.

24. By the acts of the Legislature each Legislative Representative District is entitled to send, on competitive examination, one properly prepared student each year, between the ages of twelve and twenty-five, to the College, free of tuition. The candidate presenting himself at the College for admission under this authority shall deliver to the President a certificate from his district Board of Examination, setting forth "that the Board was duly appointed by 'the Court of Claims,' as prescribed in the charter of the College, approved March 4, 1880; that he is between the ages of twelve and twenty-five, and that he has been selected on competitive examination from all of the students (of whom there shall not be more than one from each common school) sent before the Board by the trustees and teachers of the several common schools in the district." The candidate shall then be examined by the Faculty or a committee appointed by it, and must pass a satisfactory examination in Spelling, Reading, Writing, Arithmetic as far as percentage, English Grammar and Geography, in order to be admitted as a "*properly prepared*" student within the meaning of the act of the Legislature.

25. The Charter of the College also provides "that teachers or persons preparing to teach may be admitted free of tuition charge for one year, at the rate of not more than four, at the discretion of the Board of Trustees, for each Legislative Representative District." A person desiring admission under this provision must present to the President a certificate from the School Commissioner of his county, or from some other satisfactory source, setting forth "that the applicant is a citizen of the county from which admission is claimed, and that he is a teacher or is preparing to teach."

26. The charter also provides "that other students, without regard to place of residence or birth, may also be admitted to the College on the payment of the fees prescribed for them by the Board of Trustees or the Academic Board."

29. No applicants will be admitted who are under fourteen years of age, excepting those who, by the charter of the College, are admitted to free tuition at an earlier age.

30. *Every student on admission, and before he is allowed to recite, shall present to the President a certificate from the Treasurer showing that he has paid the sum required in advance on account of tuition or other items.*

31. As a further condition of admission, the applicant must answer affirmatively the following questions, viz: Have you read and understood the regulations governing this Institution? Do you acknowledge your obligation to obey them? He must also subscribe the following form in a book kept for that purpose by the Faculty: "We, whose names are hereunto subscribed, do declare that we acquiesce in the regulations of the Agricultural and Mechanical College of Kentucky, and acknowledge our obligation to obey them."

32. Having complied with the prescribed conditions, the student shall be registered on the College roll. He shall be considered as a member of the College, and amenable to its regulations during vacations as well as during the sessions, until he shall have been graduated or formally discharged, honorably or otherwise. In the case of an honorable discharge he shall be entitled to a certificate in the following words:

"I certify that A B was honorably discharged from the Agricultural and Mechanical College of Kentucky on the———— day of————.

"————————————,

"*Secretary (or Clerk) of the Faculty.*"

33. No honorable discharge or leave of absence will be granted to a student within six weeks of the termination of the collegiate year, excepting in cases of great emergency.

34. Every student, on entering the Institution, shall be furnished with a copy of its regulations, and no plea of ignorance shall be admissible in extenuation of any failure to comply with their requirements.

PRACTICAL INSTRUCTION AND TRAINING.

58. In addition to the theoretical study required of every male student in mechanics, agriculture and military arts, every male student who accepts the privilege of free tuition, and such others as may elect, shall pursue a course of practical instruction in mechanics and agriculture. For labor performed in that way, that is valuable otherwise than as a means of instruction, a reasonable compensation will be allowed, the proceeds going, if necessary, first, to supply the student with the prescribed military uniform, and, after that, toward the payment of his rent and board account.

59. For military instruction and training there will be a drill or other military exercises every day, Saturdays and Sundays excepted, and lasting one hour, unless the President may dispense with it. The drill will be conducted in the academic building when the weather or condition of the ground will not permit it out of doors. Special military exercises may be ordered by the President at any time.

64. Besides the means above provided for the repression of neglect or misconduct, a demerit system shall be enforced. The Commandant shall keep a register of all delinquencies for which the students are reported, and shall charge against each offense, not satisfactorily explained, a number of demerits according to the following scale:

An offense of the first class will count	5
An offense of the second class will count	4
An offense of the third class will count	3
An offense of the fourth class will count	2
An offense of the fifth class will count	1

In the first year of the student at the College, offenses will count one-third less than in the above scale. The Faculty will classify to suit this scale the offenses ordinarily committed by students. At the end of every month for which the number of demerits recorded against any student is less than 10, the difference between 10 and the number recorded shall be deducted from his aggregate record of demerit.

65. Any student whose record of demerit at the close of a session shall amount to 100 for that session, shall, *ipso facto*, be dismissed.

DISCIPLINE AND POLICE.

68. When a student has been reported for any grave misdemeanor, requiring severe punishment, the Commandant shall order his arrest, either directly or through the Adjutant.

69. In case of violent disturbance, open contumacy, or other outrageous conduct on the part of a student, the Officer of the Day, or any member of the Faculty present, may place the offender in arrest, and order him to his quarters. In all such cases the arrest must be promptly reported to the Commandant, and by him to the President.

70. A student placed in arrest is in duty bound to obey the orders of the officer making the arrest, and the conditions attached to it, on pain of dismissal.

71. No student in arrest is allowed to exercise command, but shall confine himself to his quarters until released, unless otherwise specially ordered, except when required to be absent for the performance of some of his academic or military duties, and except on a necessary occasion, and for meals.

72. No student in arrest will make a visit to the commanding or other officer unless sent for. In case of business he shall make known his object in writing, and he shall not apply for the usual indulgences granted to students.

73. No student will be released from arrest except by the President or by the Commandant.

74. A student placed in confinement for punishment shall be subject to the same regulations as a student in arrest; and a breach of confinement, or a failure to perform any extra duty awarded as a punishment, shall be considered an offense of the gravest nature, and treated accordingly.

75. All deliberations or discussions among students having the object of conveying praise or censure, or any mark of approbation or disapprobation toward the College authorities, are forbidden.

76. Any student who shall disobey a lawful command of the President or of any Professor, Instructor or other superior officer, or behave himself in a refractory or disrespectful manner toward either of them, shall be dismissed, or otherwise less severely punished, according to the nature of his offense.

77. No cadet shall bring any spirituous or intoxicating liquor,

or cause the same to be brought within or near the College limits, or have the same in his room or possession, upon pain of being dismissed, or less severely punished as the Faculty may direct.

78. Any student convicted of visiting a drinking saloon, or a gambling or other direputable house, or of being intoxicated, or of gambling at cards or other games of chance, or who shall make, cause or procure to be made, a false official report or statement in regard to a matter of College duty or government, shall be dismissed, or less severely punished according to the gravity of his offense.

79. No student shall play at cards, or any other game of chance, within the College limits, or bring or cause to be brought within the limits, or have in his room, cards or other articles used in games of chance. All games and amusements of every kind are forbidden during study hours.

80. All conspiracies and combinations of students, with a view of violating or evading the regulations of the College, are prohibited on pain of dismissal; and any interference of one or more students with another student, or with a candidate for admission, in the nature of "hazing," shall be punished as the Faculty may direct. And no student, whether resident in the dormitory or elsewhere, shall be a party to any combination, or sign any petition, remonstrance or protest, for any purpose relating to the management, government or conduct of any department or interest connected with the College or dormitory, or under its supervision or control.

81. The use of tobacco for smoking or chewing on any duty, or in the College building, dormitories or dining-rooms, and all profanity and obscenity, are forbidden.

82. Any student may be removed from the dormitory and the mess when, in the judgment of the President and Commandant, his removal is deemed expedient in the interest of dicipline and mor ality.

83. No student shall cook, prepare food, or give any entertainment is his room, or elsewhere within the College limits, without permission from the Commandant.

100. All permits to be absent from any duty, or from quarters during study hours, must have the approval of the President. All other permits for absence may be granted by the Commandant of the Corps; and every permit for a brief absence will be deposit-

ed with the officer of the day, to whom the student will invariably report at the expiration of his permit, whether it has been used or not. No permits will bear the name of more than one student.

101. If the cadet be in arrest or in confinement, or confined to less than the usual limits, or if his name be on the *sick report*, the fact must be stated in the permit.

102. All applications by students for leave of absence must be made in writing, addressed to the Commandant of the Corps, and specify the place to which the applicant wishes to go. If the application is for a longer period than the Commandant is authorized to grant, he will forward it to the President.

103 Every student who overstays his leave of absence must produce satisfactory evidence of his having been detained by sickness or some other unavoidable cause.

104. Every student, on returning from leave of absence, will immediately report in person to the President.

105. A leave of absence shall not be construed to grant the student any indulgence at the College, or to absolve him from the observance of regulations.

106. Applications to be excused from any duty must be made in ample time before the beginning of the duty.

107. Except in cases of sickness, no officer of the College will absent himself from any duty without the permission of the President, and with the assent of his immediate superior.

109. No student will remove from the room assigned to him without the permission of the Commandant.

123. No student shall be absent from his room between taps and reveille without permisson from the Commandant.

124. No cadet shall visit the room of another during study hours.

125. No student shall throw anything from the windows or doors, nor any missile in the vicinity of the public buildings.

126. No student shall play upon any musical instrument in study hours, or otherwise disturb the quiet of the quarters.

127. Students shall walk the halls and pass up and down stairs in study hours in a soldier-like and orderly manner. Loud talking or laughing, scuffling, and all other unnecessary noise in the buildings, are prohibited at all times.

128. No student shall post any placard or notice upon any of

the College buildings, fences or other improvements or places, or affix to the walls of his room any map, picture, or piece of written or printed paper, without the permission of the Commandant.

130. No student shall mark, cut, or in any manner deface or injure the buildings or other property of the College.

171. Any student having an explanation to offer for an offense for which he has been reported, will express it in writing, according to the prescribed form, and present it to the Commandant of the Corps within forty-eight hours after its publication. If satisfactory, the Commandant will erase the report; if not satisfactory, he may refer the explanation to the reporting officer, who shall endorse upon it such remarks as may be pertinent, and return it to the Commandant.

172. No explanation will be received after the lapse of forty-eight hours, unless sickness, absence, or some other unavoidable cause, which must be fully stated, has prevented its presentation within the prescribed time, in which case it must be presented as soon as possible.

173. Whenever a student is absent from any duty, or absent from quarters after taps, or any other time longer than thirty minutes, he shall be punished as if beyond the College limits, unless his absence is satisfactorily accounted for.

174. Explanations will include only such statements of fact and of the intentions of the student as may be necessary for a correct understanding of the case, and will not be made the medium of complaint or criticism or of irrelevant remarks.

175. Appeals to the Preident for the reconsideration of a report will not be entertained after the expiration of ten days from the time they were recorded, except in case where it was impracticable to apply for a reconsideration within that time.

176. No student shall address an officer or cadet who has reported him for an offense on the subject of such report, unless specially permitted, in writing, by the Commandant of the corps: and no officer or cadet, having made such report against a student, shall hold any conversation with him concerning it, unless referred to with the proper permission.

CALENDAR.

Entrance examinations begin	Monday, Sept. 7, 8:30 A. M. 1891
First term begins	Wednesday, Sept. 9, 8:30 1891.
Thanksgiving	Thursday, Nov. 26, 1891.
Christmas Holidays begin	Wednesday, Dec 23, 12 M. 1891.
Recitations resumed	Monday, Jan. 4, 8:30 A. M. 1892.
Second term begins	Monday, Jan. 18, 1892.
Washington's Birthday	Monday, Feb. 22, 1892.
Final examinations	May 16-31, 1892.
Union Literary Society exhibition	Friday, May 20, 8 P. M. 1892.
Patterson Society exhibition	Friday, May 27, 8 P. M. 1892.
Board of Trustees meet	Tuesday, May 31, 2 P. M. 1892.
Alumni meet	Wednesday, June 1, 3 P. M. 1892.
Alumni banquet	Wednesday, June 1, 8 P. M. 1892.
Commencement	Thursday, June 2, 10 A. M. 1892.

Kentucky Agricultural Experiment Station.

Report of the Director.

The Kentucky Agricultural Experiment Station is, by an act of Congress, a department of the Agricultural and Mechanical College of Kentucky. It was in existence nearly two years before Congress passed the Hatch act.

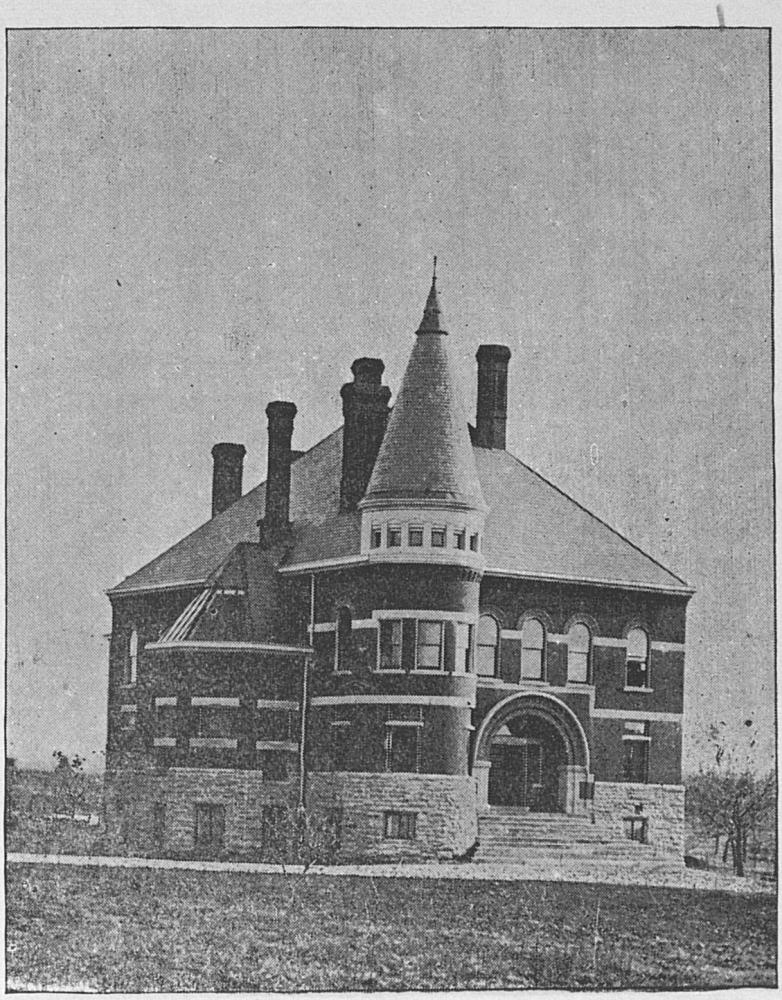
HISTORICAL.

The Station owes its existence to a resolution of the Executive Committee of the Board of Trustees of the Agricultural and Mechanical College of Kentucky, in September, 1885. No special organization was undertaken at this time, as it was the desire of the Board to build up the Station only as rapidly as the means of the College would allow. At a meeting of the Executive Committee, on September 25, 1885, Prof. M. A. Scovell was elected Director of the Station. He assumed his duties the following November. One room in the basement of the College was fitted up for an office, chemical laboratory and general work-room.

In the winter of 1886 the Legislature designated the Station as the Kentucky Agricultural Experiment Station, and passed an act controlling the sale of commercial fertilizers in the State, and empowered the Director of the Station to make all official analyses under the law, and authorized him to make all necessary rules and regulations for its proper enforcement.

In the spring of 1886 such tillable land as the College had was assigned to the Station for field experiments.

In June of the same year, Prof. A. M. Peter was elected Assistant Chemist of the Station. Before this the Director was alone in the work of the Station, except that, by a resolution of



EXPERIMENT STATION OF THE AGRICULTURAL AND MECHANICAL COLLEGE OF KENTUCKY.

the Executive Committee, the Professors of Chemistry, Agricul. ture and Botany were to assist in the work of the Station insofar as such work did not interfere with their proper College duties. After Congress passed the Hatch act in March, 1887, the authorities at once took steps to put the Station on a firmer basis.

The Executive Committee of the College placed the management of the Station in the hands of a Board of Control, consisting of the Executive Committee, the President of the College, and the Director of the Station; the action of the Board of Control to be subject to the Executive Committee and the General Board of Trustees.

Action was taken, looking to the purchase of a farm for experimental purposes, for the erection of a Station building for offices, laboratories, etc., and for increasing the working force of the Station, but by a decision of the Comptroller of the Treasury the funds due under the operation of the Hatch act did not become available until the following year, and no great increase of the working force could at once be made. In June, another Assistant Chemist was employed, Mr H. E. Curtis. In the fall a farm of forty-eight-and one-half acres was purchased, and in May, 1888, the contract was let for the Station Building. In June, 1888, steps were taken for the employment of an agrculturist and an assistant agriculturist, and for procuring the necessary books, apparatus, etc., which would be required as soon as the new quarters were ready.

In June, 1889 Prof. H. Garman was employed as Entomologist and Botanist for the Station, and in the following September the Station building having been completed during the summer, was occupied by the several departments of the Station and the Agricultural, Chemical and Natural History departments of the College.

EQUIPMENT.

As stated above, the erection of a Station building was commenced in June, 1888, and completed in August, 1890. This building, a plate of which will be found facing page 84 is 70 feet in length by 54 feet in width; it has two stories and a commodious basement, 11 feet from floor to ceiling. The first floor has eight rooms occupied by the offices, library, chemical, botanical and entomological laboratories of the Station and the Agricultural Department

of the College. The second floor has seven rooms all of which are occupied by the chemical department of the College except one which is used as the Photographic room. The basement contains five rooms, originally designed for store and work rooms, but temporarily occupied by the department of Natural History of the College.

The farm of the Experiment Station is situated about three quarters of a mile from the College, and as above indicated, contains forty-eight-and one-half acres. The front part of the farm is in pasture and orchard. The back portion is divided off, for the purpose of field experiments, into two hundred one-tenth acre plats, each plat being twenty-four feet wide and one hundred and eighty and one-half feet long, each being separated by roads ten to fourteen feet wide, and each tenth separated by paths three feet wide.

There are two barns on the farm, one large barn containing twenty-two large box-stalls, 12x12, besides a large loft. This barn is being arranged for storing away the products of field experiments, and for making proper stalls for feeding purposes. The barn is ample for all such purposes, and quite convenient. The smaller barn contains three horse stalls and seven cow stalls, besides a loft and two carriage sheds. There is also a large brick dwelling house on the farm, now occupied by the Director. There is an old apple orchard of five acres, and ten acres in pasture.

LINES OF WORK.

1. *Chemical.*—Much of the time of the chemists is occupied in the analysis of fertilizers, in the requirements of the State law, and of the products of the various field experiments.

Many analyses have also been made of hays, grasses, corn fodder, etc., from all portions of the State; the results of which have appeared in the station bulletins from time to time. Also analyses of soils, mineral waters, ores and other natural products are made whenever opportunity offers for such work.

2. *Field Experiments.*–The field experiments, which have been planned and undertaken, will aid to a great extent in the study of soil fertility of the State. At the Station, fertilizer experiments with corn, potatoes, hemp, tobacco, wheat and oats have been undertaken, with results which show clearly that potash is needed on our soil. The tests of varieties of various crops, methods of seeding and cultivation have received attention.

3. *Feeding Experiments.*—A number of feeding experiments have been made, whose object has been to test the value of different food stuffs on hogs and milch cows, and in this connection about 700 milk analyses have been made during the year, and it is the purpose of the Station to greatly enlarge its facilities for this kind of work.

4. *Food Adulterations.*—During the year 175 analyses of sugars, syrups, molasses, honeys and candies were made by the Director, from samples collected in Lexington, Louisville and Cincinnati. The results showed that adulterations were more frequent in syrups and honeys than is generally supposed.

5. *Entomological and Botanical.*—The Division of Entomology and Botany was organized under the charge of Prof. H Garman in July, 1889, as a new feature of the Station work. The in-door work of the department is provided for in two well lighted rooms on the second floor of the new station building. These rooms are fitted up with tables, gas and water fixtures, office desk, and with cases for the collections and special library.

The object of the department is the investigation of the botany entomology of Kentucky with relation to the agriculture of the State.

To this end it is equipped with a good outfit of microscopical apparatus and all necessary appliances for the study of bacteria having to do with plant and animal diseases; with apparatus for the treatment of plants suffering from the attacks of insects or fungi; with appliances for preparing botanical and entomological specimens; with reference collections of plants and insects; and a good working library containing the more important works bearing on the economic entomology and botany of the United States. The botanical collection is devoted mainly to plants of economic interest, such as injurious fungi, weeds, grasses and the like. The entomological collection now contains several thousand specimens, over one thousand species of which are named and arranged in systematic order.

The ultimate aim of the work is the discovery of practical means of checking, lessening, or avoiding the injuries of insects and parasitic fungi, and the dissemination among the farmers of the State of information concerning these pests. Experiments on the

use of insecticides and fungicides are consequently being made, with reference to their effectiveness, and to the best and most economical methods of preparation and application. It is hoped that the work now progressing will eventually result in a complete survey of the economic entomology and botany of Kentucky.

Meteorological Work.—On the 1st of January, 1891 the war department discontinued their Meteorological observations which have been carried on at the College since July 1888. The importance of these observations in connection with the agricultural work has led the Station to continue them under the direction of Mr. V. E. Muncy.

CORRESPONDENCE.

The Station has endeavored to solicit from the farmer every question that may be properly answered by us pertaining to agricultural pursuits. Much of the time of the Director has been spent in answering various inquiries. We deem this work of great importance. In this line we have written over eleven hundred (1,100) letters this year, some of these very long, explaining one or more principles of agriculture.

PUBLICATIONS.

The results of the experimental work at the Station are published in the form of bulletins which are distributed free to the farmers and newspapers of the State. These bulletins are not published at stated intervals, but only when sufficient material has accumulated. The demand for these bulletins is rapidly increasing and at present more than ten thousand copies of each edition are distributed. Thirty-three regular bulletins and three circulars have been published so far on the following subjects:

Experiments with wheat, bulletin Nos. 8, 11, 15, 21 and 30.

Experiments with corn, bulletin Nos. 17, 26, 33.

Experiments with potatoes, bulletin Nos. 9, 16, 22.

Experiments with hemp, bulletin Nos. 18, 27.

Experiments with tobacco, bulletin Nos. 1, 28.

Experiments with oats, bulletin No. 23.

Experiments with fertilizers on meadow land, bulletin No. 23.

Experiments with pig feeding, on meadow land, bulletin No. 19.

Commercial Fertilizers, bulletin Nos. 7, 10, 12, 13, 14, 20 and 29.

Analysis of corn fodder, hay, grasses, &c., bulletin Nos. 1, 5.

Analysis of milk, bulletin No. 3.

Distillery slop, bulletin No. 4.

Clover, bulletin No. 6.

Treatment of an old apple orchard, bulletin No. 18.

Broom rape of hemp and tobacco, bulletin No. 24.

Strawberries, bulletin Nos. 25 and 32.

Some strawberry pests, bulletin No. 31.

A new wheat insect, bulletin No. 30.

Vegetables, bulletin No. 32.

Potash Salts as fertilizer, special bulletin.

Announcement of the organization of the Station, circular No. 1.

The fertilizer law, circular No. 2.

Insecticides and Fungicides, circular No. 3.

CIRCULAR NO. 2.

THE FERTILIZER LAW.

The following is a copy of an act passed by the General Assembly of the Commonwealth of Kentucky. Persons selling fertilizers in this State will take notice.

M. A. SCOVELL,

Director Kentucky Agricultural Experiment Station.

APRIL 26, 1886.

CHAPTER 638.

AN ACT to regulate the sale of Fertilizers in this Commonwealth, and to protect the Agriculturist in the purchase and use of same.

§ 1. *Be it enacted by the General Assembly of the Commonwealth of Kentucky*, That on or before the first day of May in each year, before any person or company shall sell, offer or expose for sale, in this State, any commercial fertilizer whose retail price is more than ten dollars per ton, said person or company shall furnish to the Director of the Agricultural Experiment Station, inaugurated by the Agricultural and Mechanical College of Kentucky (which station is hereby recognized as the "Kentucky Agricultural Experiment Station"), a quantity of such commercial fertilizer, not less than one pound, sufficient for analysis, accompanied by an affidavit that the substance so furnished is a fair and true sample of a commercial fertilizer, which the said person or company desires to sell within the State of Kentucky.

§ 2. It shall be the duty of the Director of the Kentucky Agricultural Experiment Station to make, or cause to be made, a chemical analysis of every sample of commercial fertilizer so furnished him, and he shall print the result of such analysis in the form of a label; such label shall set forth the name of the manufacturer the place of manufacture, the brand of the fertilizer, and the essential ingredients contained in said fertilizer, expressed in terms and manner approved by said Director, together with a certificate

from the Director, setting forth that said analysis is a true and complete analysis of the sample furnished him of such brand of fertilizer, and he shall also place upon each label the money value of such fertilizer computed from its composition as he may determine. The Director shall furnish such labels in quantities of five hundred or multiple thereof, to any person or company desiring to sell, offer or expose for sale any commercial fertilizer in this State.

§ 3. Every box, barrel, keg or other package or quantity of any commercial fertilizer, whose retail price is over ten dollars per ton, in any shape or form whatever, sold or offered for sale in this State, shall have attached to it, in a conspicuous place, a label bearing a certified analysis of a sample of such fertilizer, from the Director of the Kentucky Agricultural Experiment Station, as provided in the foregoing sections of this act.

§ 4. Any Manufacturer or vendor of any commercial fertilizer, who shall sell, offer, or expose for sale any fertilizer, without having previously complied with the provisions of this act hereinbefore set forth, shall, upon indictment and conviction, be fined one hundred dollars for each violation or evasion of this act, which fines, less the per centage of the Prosecuting Attorney fees, shall accrue to the benefit of, and be paid into, the state Treasury.

§ 5. The Director of the Kentucky Agricultural Experiment Station shall receive for analyzing a fertilizer and affixing his certificate thereto, the sum of fifteen dollars; for labels furnished, one dollar per hundred.

§ 6. The Director of said Kentucky Agricultural Experiment Station shall pay all such fees received by him into the Treasury of the Agricultural and Mechanical College of Kentucky, the authorities of which shall expend the same in meeting the legitimate expenses of the Station in making analyses of fertilizers, in experimental tests of same, and in such other experimental work and purchases as shall inure to the benefit of the farmers of this Commonwealth. The Director shall, within two months of the biennial meeting of the General Assembly, present to the Commissoner of Agriculture a report of the work done by [him], together with an itemized statement of receipts and expenditures for the two years preceding under the operations of this act.

§ 7. The Director of said Experiment Station is hereby authorized, in person or by deputy, to take samples for analysis, from any

lot of packages of any commercial fertilizer which may be in the posession of any dealer in this State. And he is hereby authorized to prescribe and enforce such rules and regulations as he may deem necessary to carry fully into effect the true intent and meaning of this act; and any agriculturist, a purchaser of any commercial fertilizer in this State, may take a sample of the same, under the rules and regulations of the Director of the said Experiment Station, and forward the same to the Experiment Station for analysis, which analysis shall be made free of charge.

§ 8. This act shall be in force from and after its passage, and all acts in conflict with this act are hereby repealed.

CHAS. OFFUTT,
Speaker of the House of Representatives.

JAMES. R. HINDMAN,
Speaker of the Senate.

Approved April 13, 1886.
J. PROCTOR KNOTT.

By the Governor:
J. A. McKENZIE, *Secretary of State.*