1900

South Dakota Agricultural College Catalog 1899-1900 with Announcements for 1900-1901

South Dakota Agricultural College

SOUTH DAKOTA AGRICULTURAL COLLEGE.

ANNUAL CATALOG.

1899-1900.

With Announcements for 1900-1901.

PUBLISHED BY THE COLLEGE,
BROOKINGS, S. D., JULY, 1900.
PRESS PRINT.

ABBREVIATIONS.

Agriculture	Ag.
Amanuensis	Aman.
Botany	Bt.
Chemistry	Ch.
Commercial	Cl.
Dairying	Dy.
Domestic Science	Ds.
English	Eh.
Experiment Station	Ex.
Fall	F.
Geology and Agronomy	Gl.
History, Economics and Philosophy	H-P.
Horticulture	Ho.
Languages	Ln.
Mathematics and Astronomy	Ms.
Mechanical Engineering	Me.
Military	Mt.
Music and Physical Culture	Mu.
Pharmacy	Py.
Physics	Ph.
Post Graduate	P. G.
Preparatory	Pr.
Prerequisite	Pre.
Winter	W.
Steam Engineering	Se.
Special	Spec.
Spring	S.
Zoology and Veterinary Medicine	Zo.

CORRECTIONS.

Page 14,	10th	line	from	bottom,	read	Marshall	for Marsall
" 27,	4th	"	"	top,	"	Johnson	" Jonnson
" 28,	9th	"	"	bottom,	"	Mathiesen	" Mathieseln
" 44,	3rd	"	"	"	"	Parallel	" Parallell
" 49,	7th	"	"	"	"	1900	" 1901
" 49,	4th	"	"	"	"	1901	" 1900
" 67,	8th	"	"	top,	"	42	" 41
" 96,	13th	"	"	"	"	Cicero	" Virgil
" 99,	10th	"	"	"	"	Luquien's	" Luquieu's
" 105,	11th	"	"	bottom,	"	Law	" Development
" 117,	9th	"	"	top,		Architectural	" Agricultural
" 129,	10th	"	"	bottom,	"	Moscheles'	" Mochele's

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CALENDAR FOR 1900-1901.

1900. FALL TERM, TWELVE WEEKS.

September 24-25—Examinations and Registration.
September 26—Work of Fall Term Begins at Noon.
September 29—Faculty Reception to Students (in Armory.)
October 2—President's Annual Address to Students.
November 29—Thanksgiving Holiday.
December 19—Fall Term Ends.

1901. WINTER TERM, TWELVE WEEKS.

January 2—Work of Winter Term Begins.
January 5—Faculty Reception to Students (in Armory.)
February 22—Holiday (Except Attendance at Chapel.)
March 27—Winter Term Ends.

SPRING TERM, TWELVE WEEKS.

April 3—Work of Spring Term Begins.
May 30—Holiday (Except Attendance on Memorial Exercises.)
June 26—Work of Spring Term Ends.
June 27—10:30 A. M., Commencement Exercises.
9:00-12:00 P. M., Faculty Reception to Students and Friends.
September 25—Fall Term for 1901 Begins.
December 18—Fall Term for 1901 Ends.

CALENDAR OF SHORT COURSES IN 1901.

January 2 to March 27—Special in Agriculture.
January 2 to March 27—Dairy Science (Butter Making.)
January 2 to March 27—Special Domestic Science.
January 2 to March 27—Nurserymen's in Horticulture.
January 2 to June 27—Practical Steam Engineering.
January 2 to June 27—Public School Drawing.

FACULTY AND INSTRUCTORS 1900 AND 1901.

JOHN WILLIAM HESTON, Ph. D., LL. D., President.
Professor of History and Economics.

GEORGE LINCOLN BROWN, Ph. D.,
Professor of Mathematics and Astronomy.

LUCY AMELIA DuBOIS, A. B., Preceptress.,
Professor of English and Latin.

FRANK GREGORY ORR,
Secretary and Registrar.

ADA BERTHA CALDWELL,
Professor of Industrial Art.

ELLERY CHANNING CHILCOTT, M. S.,
Professor of Agriculture and Geology.

ARTHUR BOONE CROSIER,
Professor of Stenography and Commercial Science.

ELMER KENDALL EYERLY, A. M.,
Professor of English Literature and Oratory.

ALICE DYNES FEULING, B. S.,
Professor of Domestic Science.

NELS EBBESEN HANSEN, M. S.
Professor of Horticulture and Forestry.

ROBERT FLOYD KERR, A. M.,
Librarian and Principal of Preparatory Department.

HUBERT BERTON MATHEWS, M. S.,
Professor of Physics and Electrical Engineering.

EDWARD LOCKHART MOORE, B. S., D. V. S.,
Professor of Zoology and Veterinary Medicine.

REGENTS OF EDUCATION.

HON. H. H. BLAIR,.....Elk Point
HON. ROBERT W. HAIRE,.....Aberdeen
HON. M. F. GREELEY,.....Gary
HON. L. M. HOUGH,.....Sturgis
HON. F. A. SPAFFORD, ...Flandreau

OFFICERS OF THE BOARD.

HON. H. H. BLAIR,.....President
HON. M. F. GREELEY, ...Secretary
HON. JOHN SCHAMBER, (State Treasurer,).....Treasurer

HON. F. A. SPAFFORD, Regent Committee of the College.

MR. A. M. ALLEN, Secretary and Accountant for the College, Brookings, S. D.

MR. C. A. SLOAN, Assistant Secretary, Brookings, S. D.

JOSEPH GREELEY PARSONS, M. D.,
Medical Director of Gymnasium.

EDITH LOUISE PRATT, (on leave of absence,)
Professor of Music and Physical Culture.

DeALTON SAUNDERS, A. M.,
Professor of Botany and Entomology.

JAMES HENRY SHEPARD, B. S.,
Professor of Chemistry.

HALVOR CHRISTIAN SOLBERG, M. E.,
Professor of Mechanical and Steam Engineering.

JOHN HERSEY WHEELER, A. B.,
Professor of Modern Languages and Director of Athletics.

BOWER THOMAS WHITEHEAD, B. S., Ph. C.,
Professor of Pharmacy.

....*(not yet appointed.)*
Professor of Military Science and Tactics.

AUSTIN BENJAMIN CRANE, B. S.,
Assistant in Mathematics.

ALBERT SPENCER HARDING, A. M.,
Assistant in History and Economics.

HOWARD HARTMAN HOY, B. S.,
Assistant in Mechanical Engineering.

WILLIAN HAW KNOX, B. S.,
Assistant in Chemistry.

MINNIE MINERVA LAWRENCE, B. S..
Assistant in Domestic Science.

MINNIE McNAMEE,
Assistant in Music and Physical Culture.

WALTER STRICKLAND THORNBER, M. S.,
Assistant in Botany and Horticulture.

ALBERT H. WHEATON,
Assistant in Animal Husbandry and Dairy Science.

OTHER REGULAR EMPLOYEES.

MRS. F. G. ORR, Matron of Girls' Cottage.
LEWIS W. CARTER, B. S., Sup't. Highmore Exper. Station.
WILLIAM WEST, Foreman College and Station Farms.
CHARLES HAROLDSON, Gardener.
WILLIAM THORNBER, B. S., Herdsman.
GEORGE E. PURDY. Janitor and Carpenter.
SAMUEL WOOD, Assistant Engineer and Fireman.

TUTORS FOR 1900-1901.

(These will be appointed and published upon the opening of the new College year.)

All students absent from regular College Exercises will be expected to arrange with a tutor for making up omitted work.

COMMITTEE ANNOUNCEMENTS FOR 1900.

Faculty meets regularly every Monday, during term time at 4:15 p. m. To facilitate its work and aid the executive in disposing of minor questions, the following committees are appointed for the current year.

EXECUTIVE (Admission, Advertisement, Credits, Deportment.)
Brown, Mathews, Kerr, Wheeler, Saunders, Whitehead and Orr.

ATHLETICS:
Wheeler, Eyerly, Mathews and Knox.

COLLEGE EXTENSION:
Chilcott, Mathews, Eyerly and Kerr.

LIBRARY:
Kerr, Shepard, Brown, DuBois and Harding.

LITERARY:
Eyerly, Wheeler, Caldwell, McNamee and Crosier.

LIVING AFFAIRS:
Solberg, DuBois, Wheaton, Feuling, Crane and Thornber.

SCIENTIFIC RESEARCH:
Shepard, Chilcott, Hansen, Saunders and Moore.

SOCIAL AFFAIRS:
DuBois, Hansen, Caldwell, Feuling, Lawrence, Orr, Crosier and Hoy.

AGRICULTURAL EXPERIMENT STATION STAFF.

Jas. H. Shepard, Director,.....Chemist
E. C. Chilcott, Vice-Director,.....Agriculturist
D. A. Saunders,..... Botanist and Entomologist
E. L. Moore,.....Zoologist and Veterinarian
N. E. Hansen,.....Horticulturist

ASSISTANTS.

A. B. Holm, ...Agriculture
W. H. Knox,.....Chemistry
Walter S. Thornber,.....Botany and Horticulture
A. H. Wheaton,.....Dairy Science
Lillian Langdon,.....Station Stenographer

FARMERS' INSTITUTE LECTURERS AND INSTRUCTORS.

M. F. Greeley,.....Director of Institutes
Stacy A. Cochrane,..... ...Conductor of Institutes
Irwin D. Aldrich,....Lecturer on Stock Breeding and Feeding
Charles F. Whaley,.....Lecturer on Dairy Science
Minnie M. Lawrence, ...Instructor in Domestic Science

(This corps is assisted by members of the Station Staff when their work at the college will permit.)

COLLEGE ALUMNI.

ALUMNI ASSOCIATION.

ERNEST G. SASSE, '96, President.
HOWARD H. HOY, '96, First Vice-President.
FRANK E. BOYDEN, '97, Second Vice-President.
FRANK GROVE, '00, Third Vice-President.
ALBERT S. HARDING, '92, Secretary and Treasurer.

GRADUATE CLUB.

WALTER S. THORNBER, '97, President.
HUBERT B. MATHEWS, '92, Vice-President.
MINERVA M. LAWRENCE, '99, Secretary and Treasurer.

GRADUATES.

Name.	Class	Degree.	Occupation.	Address.
Ainsworth, Cephas B.	'97	B. S.	Bank Clerk,	Estelline
Ainsworth, Howard	'98	B. S.	Ret. Soldier,	Baraboo, Wis
*Aldrich, Ellen (Roe)	'89	B. S.		
Aldrich, Irwin D.	'91	B. S.	Editor,	Big Stone
Aldrich, John M.	'88	B. S.	Prof. Univ. Idaho,	Mosco, Io
Allen, Wm. C.	'89	B. S.	Physician,	Chicago, Ill
Allison, Wm. F.	'95	B. S.	Druggist,	Brookings
Atkinson, Jesse C.	'96	B. S.	Carpenter,	Brookings
Atkinson, George W.	'97	B. S.	Topographer,	White
Atkinson, Walter	'97	B. S.	Draughtsman,	Chicago, Ill
Austin, Steven E.	'92	B. S.	Machinist,	Iowa
Bates. Edmund T.	'93	B. S.	Farmer,	Onslow, Ia.
Barton, Alice E.	'98	B. S.	Teacher,	Brookings
Bacon, Nora (Updyke)	'91	B. S.	Housewife,	Chicago, Ill

*Deceased.

Name.	Class.	Degree.	Occupation.	Address.
Beck, Milton	'93	B. S.	Mechanic.	Lansing, Mich
Beck, Louis	'98	B. S.	Mechanic,	Deadwood
Bell, Wm. D.	'91	B. S.	Editor,	Slayton, Minn
Bentley, Wm. S.	'91	B. S.	Physician.	Gary
Bolles, Myrick N.	'98	B. S.	Instructor,	Rapid City
Boswell, Kate L.	'89	B. S.	Teacher,	Estelline
Boyden, Frank E.	'97	B. S.	Supt. of Schools,	Brookings
Boyden, Maude (Hegeman)	'98	B. S.	Music Teacher,	Brookings
Brown, Cyrus O.	'94	B. S.	Attorney,	Tingley, Ia
Brown, Ida (Dibble)	'96	B. S.	Housewife,	Iowa
Brown, James A.	'94	M. S.	Attorney,	Iowa
Brown, Sara	'95	B. S.	Teacher,	Shannon City, Ia.
Brooke, Grace (Lawshe)	'89	B. S.	Housewife,	Brookings
Bullen, Grace (Young)	'97	B. S.	Housewife,	Ashton
Carter, Lewis W.	'96	B. S.	Assistant,	Highmore
Chamberlain, Sarah B.	'91	B. S.	Nurse,	Chicago, Ill
Chilcott, E. C.	'98	M. S.	Prof., S. D. A. C.,	Brookings
Clevenger, John W.	'97	B. S.	Dentist,	Chamberlain
Colegrove, Ida May	'99	B. S.	Teacher,	Brookings
Cornell, Harry M.	'95	B. S.	Stenographer,	Brookings
Crane, Austin B.	'91	B. S.	Instructor,	Brookings
Crane, May (Cranston)	'89	B. S.	Housewife,	Brookings
Cross, Alvah G.	'89	B. S.	Traveling Salesman,	Huron
Crowley, C. (Madden)	'97	B. S.	Housewife,	Marsall, Minn
Cunningham, Sara (Haber)	'89	B. S.	Housewife,	Spokane, Wash
Curtis, Elsie E.	'98	B. S.	Teacher,	Iroquois
Davidson, Margaret D.	'98	B. S.	Teacher,	Thorton, Texas
Davis, Homer	'91	B. S.	Student,	Omaha, Neb
Davis, Samel H.	'92	B. S.	Farmer,	Plankington
Dibble, Hattie (Doughty)	'91	B. S.	Housewife,	Arlington
Day, John M.	'90	B. S.	Farmer,	Mellette

Name.	Class.	Degree.	Occupation.	Address.
Dillon, Willis C.	'91	B. S.	Attorney,	Redfield
Downing, Jennie C.	'96	B. S.	Teacher,	Brookings
Edgerton, Wm. M.	'93	B. S.	Physician,	Faulkton
Egeberg, Hildus	'90	B. S.	Farmer,	Brookings
Eno, Durrell D.	'89	B. S.	Machinist,	Mount Vernon
Findeis, Phillip	'99	B. S.	Merchant,	Miranda
Fjerstad, Hans C.	'98	B. S.	Teacher,	Aurora
Fourt, Fanny (Shannon)	'91	B. S.	Housewife,	Fairfield, Ia
Frick, Mary A.	'91	B. S.	Stenographer,	Mpls., Minn
Grady, Francis A.	'89	B. S.	Attorney,	Parkston, Minn
Griffiths, David	'92	B. S.	Prof. State Univ.,	Arizona
Grattan, Paul H.	'96	B. S.	Collector,	Elkton
Haasrud, Ole H.	'90	B. S.	Teacher,	Bratsburg
Hamlin, Jr., John R.	'92	B. S.	Photographer,	Casselton, ND
Hann, J. B.	'91	B. S.	Teacher,	Pierre
Harding, Albert S.	'92	B. S.	Instructor,	Brookings
Harding, Neva (Whaley)	'97	B. S.	Housewife,	Brookings
Harding, Chas. J.	'98	B. S.	Teacher,	England
Harkins, Lilla A.	'90	B. S.	Instructor,	Bozeman, Mont
Hatfield, Ira N.	'92	B. S.	Attorney,	Lincoln, Neb
Hazel, Flora (Ainsworth)	'98	B. S.	Teacher,	Lebanon
Hazel, Wm. A.	'97	B. S.	Merchant,	Lebanon
Hegeman, Harry A.	'96	B. S.	Capt. U. S. A.,	Dagupan, P I
Hegeman, Mabel I.	'98	B. S.	Teachers,	Brookings
Holm, Andrew B.	'96	B. S.	Asst. S. D. A. C.,	Brookings
Hopkins, Mrs. C. G.	'94	B. S.	Housewife,	Germany
Hopkins, Cyril G.	'90	B. S.	Chemist,	Germany
Hodgeson, Herbert H.	'98	B. S.	Civil Engineer,	Deadwood
Houstin, Grant	'91	B. S.	Physician,	Joliet, Ill
Hoy, Howard H.	'96	B. S.	Instr., S. D. A. C.,	Brookings

Name.	Class.	Degree.	Occupation.	Address.
Hoy, Emma (Mathews)	'96	B. S.	Housewife,	Brookings
Husted, Harley H.	'97	B. S.	Instructor,	Lincoln, Neb
Irish, Henry C.	'91	B. S.	Shaw Bot. Gar.	St. Louis, Mo
Irish, Maggie (Duffey)	'90	B. S.	Housewife,	St. Louis, Mo
Jenkins, John C.	'90	B. S.	Attorney,	Brookings
Jolley, Wm. G.	'97	B. S.	Lawyer,	Oldham
Kenyon, Arthur H.	'90	B. S.	Real Estate.	Spokane, Wash
Keeney, Emma A.	'92	B. S.	Physician.	Mpls., Minn
Knox, Wm. H.	'98	B. S.	Assistant,	Brookings
Knox, Elinor (Williams)	'94	B. S.	Housewife,	Brookings
Korstad, Hans	'86	B. S.	Editor.	Brookings
Korstad, Mary	'96	B. S.	Teacher,	California
Lawrence, Mary M.	'99	B. S.	Institute Instr.,	Brookings
Lawrence, Wm. H.	'99	B. S.	Book Keeper.	Seguin, Wash
Lawrence, Claude W.	'98	B. S.	Teacher.	Seguin, Wash
Lawrence, Clay	'98	B. S.	Teacher,	Key Stone
Lawrence, Philip A.	'88	B. S.	Attorney,	Castlewood
Larson, Lars K.	'89	B. S.	Cashier,	Dell Rapids
Lewis, Perry	'91	B. S.	Tinner,	Mankato, Minn
Luke, Fred K.	'94	B. S.	Bot. Florist,	Columbus, O
Lusk, William C.	'96	B. S.	Editor,	Yankton
Mason, Nellie,	'99	B. S.	Teacher,	Brookings
Madden, Margaret	'92	B. S.	Teacher,	Brookings
Mathews, Alta K.	'96	B. S.	Teacher,	Brookings
Mathews, Eva (Plocker)	'92	M. S.	Housewife,	Brookings
Mathews, Hubert B.	'92	M. S.	Prof. Physics.	Brookings
Merrick, Mable (Mayland)	'95	B. S.	Housewife.	Kansas City, Mo
McAndrew, James E.	'92	B. S.		Iroquois
McKenney, Dustin W.	'89	M. S.	Dir. Man. Tr.,	Davenport, Ia
*McLouth, Ida B.	'92	B. S.		
McLouth, Benjamin F.	'93	B. S.	Draughtsman,	Cleveland, O

*Deceased.

Name.	Class.	Degree.	Occupation.	Address.
McLouth, Louis C.	'89	B. S.	Sec. Auto. Co.,	Cleveland, O
Moore, Anna (Parker)	'95	B. S.	Housewife.	Brookings
Mork, Albert A.	'89	B. S.	Clerk,	Brookings
Nachtigal, Isaac	'99	B. S.	Teacher.	Marion
Olson, Eva L.	'97	B. S.	Teacher,	Minnesota
Orcutt, Carrie (Ross)	'89	B. S.	Housewife.	Northfield, Minn
Paddock, Jay M.	'98	B. S.	Teacher,	Montrose
Parker, Fanny M.	'94	B. S.	Teacher,	Great Falls, Mont
Parsons, Thomas S.	'97	B. S.	Teacher,	Brookings
Pratt, Alice (Robinson)	'91	B. S.	Stenographer,	Gr. F'ls, Mont
Pyne, Estel W.	'90	B. S.	Music D'ler,	Santa Anna, Cal
Riemann, Edith F.	'98	B. S.	Teacher,	Rapid City
Robertson, Ada N.	'93	B. S.	Clerk,	Helena, Mont
Robertson, Clarence H.	'93	B. S.	Instructor,	Lafayette, Ind
Robertson, Edith (Salisbury)	'95	B. S.	Col. Inst'r,	Lafayette, Ind
Rogers, Edmund	'90	B. S.		
Ross, Abbie E.	'89	B. S.	Missionary,	China
Roe, Guy W.	'90	B. S.	Manufacturer,	McIntrye, Ia
Roe, Robert	'97	B. S.	Farmer,	Brookings
Sasse, Ernest G.	'96	B. S.	Physician,	Revillo
Saylor, Marcus A.	'86	B. S.	Real Estate,	Tacoma, Wash
Saylor, Christie (Hargis)	'97	B. S.	Housewife,	Elmo, Mo
Schlosser, Thos. F.	'92	B. S.	Clergyman,	Palestine, Neb
Schoppe, W. J. A.	'93	B. S.	Teacher,	Yankton
Sevy, Isaac B.	'95	B. S.	Clergyman,	Millbrook, Ill
Sevy, Orpha (West)	'97	B. S.	Housewife,	Millbrook, Ill
Shuster, John W.	'97	B. S.	Elect'l Engin'r,	Peoria, Ill
Sherwin Howard	'99	B. S.	Civil Engin'r,	Yonkers, N Y
Solberg, Halvor C.	'91	B. S.	Prof. Mech. Eng.,	Brookings
Sproul, Alex H.	'94	B. S.	Teacher,	Elgin, Ill
Sproul, Wm. T.	'95	B. S.	Draughtsman,	Rockford, Ill
Stoner, Minnie A.	'90	B. S.	Prof. Do. Sc.	Manhattan, Kan

Name.	Class.	Degree.	Occupation.	Address.
Tanzy, Hattie (Dibble)	'94	B. S.	Housewife.	Artesian
Thornber, John J.	'95	B. S.	Teacher.	Nebraska City, Neb
Thornber, Wm. T.	'98	B. S.	Asst. Herdsman,	Brookings
Thornber, Walter S.	'97	B. S.	Assistant.	Brookings
*Tanzy, Marvin F.	'94	B. S.		
Torrence, Nettie (Sloan)	'92	B. S.	Dressmaker,	Brookings
Towne, Addie (Loveland)	'98	B. S.	Housewife.	Aberdeen
Towne, Judson R.	'98	B. S.	Teacher.	Aberdeen
Valleau, Vinal B.	'91	B. S.	Stenographer,	Minneapolis
Walters Edith.	'99	B. S.	Teacher.	Bruce
Walters, Wm. H.	'97	B. S.	Clerk.	Bruce
Wardall, Anna L.	'89	B. S.	Physician.	Topeka, Kan
Wardall, Norman M.	'90	B. S.	Bookkeeper.	Huron
Waters, George D.	'94	B. S.	Teacher,	Madison
Wellman, Lulah E.	'88	B. S.		Jamestown, N Y
West, Hugh H.	'91	B. S.	Physician,	Peoria, Ill
West, George H.	'99	B. S.	Student,	Iowa City, Ia
Whitehead, B. T.	'97	B. S.	Prof. Pharm.,	Brookings
Whitten, John C.	'92	B. S	Prof. Hor.,	Columbia, Mo
Wilcox, Alice E.	'97	B. S.	Teacher.	Thawville, Ill
Wilcox, Ernest N.	'95	B. S.	Teacher.	Thawville, Ill
Williams, Effie (Snell)	'92	B. S.	Housewife.	Washington, D C
Williamson, Albert	'96	B. S.	Editor,	Oacoma
Winegar, Albert J.	'92	B. S.	Draughtsman.	Beloit, Wis
Wolgemuth, Lee E.	'91	B. S.	Mechanic.	St. Louis, Mo
Work, Lloyd E.	'97	B. S.	Student.	Fairfield, Ia
Young, Gilbert A.	'94	B. S.	Student,	Lafayettee, Ind

*Deceased.

GRADUATES OF 1899--1900.

DEGREE OF BACHELOR OF SCIENCE.

Hart Mantor Allen.
Clark William Anderson.
Jay Lee Beebe.
Ella Marie Carlson.
Esther Matilda Carlson.
Mary Emily Davies.
Sara Isabella Davies.
J. W. R. Helmuth De La.
Mattison Henry Doughty.
Francis Wendall Grove.
Carl William Harza.
Clinton David Kendall.
Jessie Lawrence.
Alice May Mathews.
Roscoe Allen Mathews.
Freda Cordelia Morrison.
Gustava Margaret Olson.
Callie Theodate Williams.

DEGREE OF PHARMACY GRADUATE.

Corwin Bela Baldwin.
Jesse Edward Brosseau.
John Connell.
Henry Eckert, Jr.
John Earl Else.
William Adolph George.
Bertrand Maynard Hart.
Robert Henry Jones.

CERTIFICATE IN COMMERCIAL SCIENCE.

Joseph B. Aslakson.
Clyde W. Allen.
Herbert L. Eckhart.
Alfred B. Larson.
Louis H. McClain.
Robert E. Walpole.
Earl F. Jenks.

CERTIFICATE IN AMANUENSIS COURSE.

Alfred B. Larson.
Nona G. Murphy.
Clyde W. Allen.
Guy E. Kelley.

CERTIFICATE IN STEAM ENGINEERING.

Clarence N. Anderson.
Fred R. Betkey.
Richard Bielski.
Martin C. Hanson.
Roy A. Hilton.
David Johnson.
Franklin W. Ortmayer.
Daniel J. Olson.
Clyde Perry.
Jairus E. Rowley.
John M. Sayre.
August Stangeland.

Menris Lieske.
Anatole La Brie.
Emil J. Mundt.
Bernhart J. Oyan.
Arthur A. Thogerson.
Clarence Thompson.
Clark Torrence.
Robert M. Whitmus

CERTIFICATE IN DAIRYING.

Hale M. Crowhurst.
Arch C. Frame.
Knute Gabrielson.
Frank Hannigan.
Charles Lingenfelter.
Chrest Nelson.
Hubert A. Ripley.
Howard Rowen.
Fred Seney.
James. A. Seeley.

LIST OF STUDENTS.

For key to abbreviations see page two.

Name.	Line of Work.	Address.
Aanrud, Martin	Pr.	Hanson
Adams, Clarence A.	Aman.	Lake Benton, Minn
Agar, Janey	Pr.	Estelline
Agar, John B.	Pr.	Estelline
Aldrich, George M.	Me.	Aurora
Allen, Clyde W.	Aman.	Brookings
Allen, Hart M.	Ag.	Brookings
Allen, James R.	Se.	Frankfort
Allen, Mattie M	Pr	Brookings
Almond, Fred C.	Me.	Clear Lake
Alrick, Ida	Pr.	Brookings
Alrick, Lewis H.	Pr.	Brookings
Alrick, Lewis J.	Pr.	Brookings
Anderson, Albert W.	Se.	Dalesburg
Anderson, Angel	Cl.	Irene
Anderson, Clarence	Se.	Toronto
Anderson, Clark	Ag.	Brookings
Anderson, Emil	Pr.	Brandt
Anderson, Helma	Pr.	Brookings
Anderson, Howard C.	Ag.	Brookings
Anderson, Mildred	Ar.	Brookings
Anderson, Peter	Se.	Hanson
Anderson, Sam E.	Pr.	Brandt
Anderson, Walter	Pr.	Brookings
Aslakson, Joseph B.	Me.	Brookings
Atkinson, Albert I.	Me.	White
Bagley, Susie	Ar.	Brookings
Baldwin Corwin B.	Py.	Olivet
Ball, Alfred B.	Py.	Doland

Name.	Line of Work	Address.
Barrette, Charles B.	Se.	Henry
Beebe, Jay L	Ag.	Lake Crystal, Minn
Beebe, John G.	Cl.	Parker
Benedict, Irving J.	Ag.	Watertown
Berkman, Carl E.	Pr.	Amherst
Berry, Linnie M.	Py.	Willow Lakes
Betkey, Fred R.	Se.	Bridgewater
Bielski, Richard	Se.	Howard
Biggar, William L	Ag.	Aurora
Binnewies, Edward R.	Me.	McCurdy
Binnewies, Wilfred G.	Me.	McCurdy
Blakely, Herbert W.	Ag.	Brookings
Bliss, Frank L.	Ag.	Mellette
Bogstie, Nettie	Pr.	Toronto
Bolles, Laura J.	Ag	Colman
Bork, Emma E.	Ds.	Revillo
Borst, Glenn M.	Aman.	Rockwell, Ia
Borst, Fred V.	Pr.	Brookings
Bortness, Clara	Pr.	Bruce
Boyd, Mary	Ds.	Brookings
Boyd, Wm. H.	Cl.	Bowdle
Brosseau, Jasper A.	Cl.	Frankfort
Brosseau, Jesse E.	Ag.	Bradley
Brown, Mrs. G. L.	Mu. Spec.	Brookings
Brown, Raymond	Me.	Doland
Brown, Robert D.	Me.	St. Lawrence
Bryan, Ardella	Ar. Spec.	Egan
Budahl, Mollie R.	Ds.	Toronto
Bullis, Ira N.	Ag.	Brookings
Bullis, Nellie	Ds.	Brookings
Burch, Walter S.	Me.	Howard
Bursheim, Peter	Cl.	Brookings
Burton, Arthur C.	Se.	Sibley, Ia
Bushnell, Maud A.	Ds.	Bushnell
Byerly, Arthur	Se.	Armour

Name.	Line of Work.	Address.
Caldwell, Ada B.	Mu. Spec.	Brookings
Carlson, Ella M.	Ds.	Lake Preston
Carlson, Esther M.	Ds.	Lake Preston
Carpenter, Abbie J.	Pr.	Bruce
Carpenter, Chester L.	Cl.	Worthing
Cheatham, Minnie E.	Pr.	Brookings
Chilcott, Ellery F.	Pr.	Brookings
Christianson, Bernett C.	Py.	Brookings
Christianson, Christine	Ds.	Brookings
Clark, Thomas A.	Cl.	Worthing
Cole, John S.	Ag.	Gary
Cole, Roy L.	Se.	Frankfort
Colegrove, Letta A.	Ds.	Brookings
Colegrove, Lotta	Ar.	Brookings
Coller, Fred A.	Pr.	Brookings
Connell, John	Py.	Yankton
Cook, Dora D.	Ds.	Aurora
Cooley, Chester A.	Pr.	Garretson
Cornell, Edward C.	Py.	Arlington
Crane, Austin B	P. G.	Brookings
Cranston, Margaret C.	Ds.	Flint
Cranston, Willis N.	Pr.	Flint
Crawford, Edward A.	Se.	Gary
Croes, Howard W.	Aman.	Wessington
Cronyn, Herbert S.	Ag.	Aberdeen
Crosier, Mrs. A. B.	Mu. Spec.	Brookings
Crothers, Laura A.	Mu.	Brookings
Crowhurst, Hale M.	Dy	Salem
Cuckow, Fred W.	Ag.	Dell Rapids
Culhane, Michael E.	Me.	Elkton
Curry, Grace B.	Mu. Spec.	Canada
Davies, Mary	Ar.	Nebraska
Davies, Sarah I.	Ds.	Nebraska
Davis. Clifford W.	Ag.	White

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Name.	Line of Work.	Address.
De La, Helmuth	Ag.	Houghton
Derungs, Jacob J.	Se.	Ramona
Digre, Christie	Pr	Prairie Farm
Digre, Petra	Pr.	Prairie Farm
Dillman, Ray L.	Aman	Revillo
Doak, William E	Cl.	Clark
Dodge, Fred E.	Me.	Brookings
Doughty, Mattison H.	Me.	White
Eckert, Henry, Jr.	Py.	Menno
Eckhart, Herbert L.	Cl.	Cavour
Egeberg, Nora E.	Pr.	Brookings
Else, Earl	Ag.	Doland
Elston, Robert W., Jr.	Me.	Aurora
Eng, Gilbert M.	Se	Elkton
Ennis, H. I.	Py.	Lebanon
Enos, Winnifred	Ds.	Brookings
Erickson, Martin L.	Ag.	Flandreau
Erickson, Rudolph B.	Pr.	Bruce
Evans, Lina F.	Ds.	Brookings
Evenson, Edward G.	Me.	Volga
Farnham, Scott H.	Pr.	Twin Brooks
Fassett, Glen L.	Cl.	Brookings
Fishback, Myra B.	Ds.	Brookings
Fjeseth, Albert B.	Cl.	Hendricks
Fleming, Michael E.	Ag.	Bryant
Frame, Arch C.	Dy.	Academy
Freed, Anton	Pr.	Bruce
Freng, Peter	Pr	Volin
Fundaun, Olaf	Se.	Baltic
Gabrielson, Knut	Dy.	Dunlap
Gentle, Ralph E.	Ag.	Brookings
George, William A.	Py.	Gettysburg
Giossi, Charles J.	Pr.	Ramona
Goodale, Alton R.	Py.	Brookings

Name.	Line of Work.	Address.
Goodale, Lucie P.	Pr.	Brookings
Granner, Julius A.	Pr.	Estelline
Graves, Gust.	Pr.	Jasper, Minn
Greig, George A.	Pr.	Leola
Grimme, Mabel	Pr.	Howard
Grinols, Mabel C.	Ds.	Strouston
Grove, Frank W.	Me.	Brookings
Grove, Robert W.	Ag.	Brookings
Grudem, Harry C.	Pr.	Brookings
Gudehus, Mrs. H. E.	Ar. Spec.	Brookings
Gunn, Henry	Pr.	Brookings
Haberman, Max	Pr.	Alpha
Hall, Roy J.	Me.	Lake Preston
Hallem, Jonas E.	Pr.	West Point
Hannigan, Edward J.	Me.	Jolley
Hannigan, Francis	Dy.	Henry
Hansen, Martin C.	Se.	Sumner
Hart, Bertrand M.	Py.	Doland
Hartwick, Jennie	Pr.	Brookings
Harza, Carl	Me.	Brookings
Harza, Mable C.	Pr.	Brookings
Harza, Roy F.	Me.	Brookings
Hatlestad, Sever M.	Pr.	Estelline
Hatton, John	Ag.	Claremont
Hayter, McPherson	Py.	Artesian
Hedger, Charles L.	Ag.	Burch
Hedger, Florence A.	Pr.	Burch
Hegeman, Mabel I	P. G.	Brookings
Hendricks, Leslie E.	Me.	Brookings
Hendrickson, Ada	Mu.	Bruce
Hepner, Frank E.	Py.	Brookings
Hess, William S.	Ag.	Estelline
Heston, Charles E.	Me.	Chicago, Ill

Name.	Line of Work.	Address.
Heston, Edward C.	Me.	Brookings
Hetland, Clarence	Cl.	Oldham
Hill, Hollis H.	Ag.	Willow Lakes
Hilton, Roy A.	Se.	Bridgewater
Hoffman, G. Beaufort	Me.	Yankton
Hoffman, Regina	Ds.	Bruce
Holbrook, Ruth	Ds.	Eureka
Holcomb, Wilfred B.	Me.	Mellette
Hollister, Arthur R.	Py.	Erwin
Holm, Andrew B.	P. G.	Brookings
Holm, Edwin A.	Pr.	Brookings
Hovey, Carl	Pr.	Bruce
Hoy, Howard H.	P. G.	Brookings
Hubbart, Minnie E.	Ds.	Brookings
Huether, John	Pr.	Sutley
Humphrey, Kenneth	Ag.	Faulkton
Ihde, Henry C.	Ag.	Warner
Ingle, Cora L.	Ar.	Bushnell
Jacobson, Lillie B.	Aman.	Toronto
Jarratt, Arthur A.	Py.	Colman
Jarratt, Walter A.	Cl.	Colman
Jarvis, S. Hall	Ag.	Faulkton
Jenks, Earl F.	Aman.	Louisberg, Minn
Jensen, Lewis N.	Me.	Conde
Jermstad, Edward I.	Me.	Brookings
Johnson, Aaron G.	Ag.	Bruce
Johnson, Albert A.	Pr.	Nutley
Johnson, Carl G.	Pr.	Dell Rapids
Johnson, Clara, T.	Ds.	Brookings
Johnson, David	Se.	Esmond
Johnson, Edward	Ag.	Toronto
Johnson, George M.	Me.	Willow Lakes
Johnson, H. Ross	Me.	Clear Lake
Johnson, Henry	Pr.	Brookings

Name.	Line of Work.	Address.
Johnson, Isaac B.	Me.	Brookings
Johnson, Julia	Pr.	Revillo
Johnson, Martin J.	Se.	Dell Rapids
Jonnson, Rhoda M	Ds.	Brookings
Johnston, Samuel E.	Ag.	Henry
Johnston, W. B.	Pr.	Henry
Jones, Robert H.	Py.	Madison
Jorgenson, Lewis	Pr.	Toronto
Juttelstad, Philip M.	Pr.	Volin
Kelley, Guy E.	Aman.	Watertown
Kelley, John W.	Cl.	Jolley
Kelsey, Effie J.	Mu.	Aurora
Kendall, Clinton D.	Ag.	Brookings
Kendall, Leonard J.	Ag.	Brookings
Kendall, M. Krete	Ar.	Brookings
Kennedy, C. LeRoy	Me.	Madison
Kieffer, Nicholas	Pr.	Roswell
Kinney, Carl W.	Pr.	Estelline
Kjos, Albert E.	Se.	Brookings
Kjos, Edwin O.	Pr.	Brookings
Knox, Arthur H.	Se.	Alpena
Knox, Mrs. W. H.	Ar.	Brookings
Kopperud, Andrew	Ag.	De Smet
Kramer, Henrietta	Ar.	Brookings
Kringen, Erick S.	Se.	Baltic
La Brie, Anatole	Pr.	Turton
Lake, Paul F.	Ag.	Burchard, Minn
Lamb, Orrin V.	Me.	Sioux Falls
Lampson, Grove	Se.	De Smet
Langdon, Lillian	Ds.	Parker
Langum, Henry	Pr.	Brookings
Larson, Aaron T.	Se.	Flandreau
Larson, Albert	Pr.	Mission Hill
Larson, Alfred B.	Aman.	Flandreau

Name.	Line of Work.	Address.
Larson, Carl H.	Pr.	Artesian
Larson, Lewis	Se.	Sherman
Lawrence, Jessie	Ds.	Woonsocket
Lawrence, Minnie	P. G.	Woonsocket
Leighty, James A.	Py.	Carthage
Leighty, Mrs. W. H.	Ar.	Brookings
Lieske, Dorman H.	Se.	Canistota
Lieske, Menris	Se.	Canistota
Lightfoot, Walter E.	Pr.	Gary
Lingenfelter, Chas.	Dy.	Hitchcock
Lloyd, Louise F.	Ds.	Aurora
Loomis, Leon E.	Ag.	Alpena
Loucks, Annie Y.	Ds.	Altruria
Loucks, Perry F.	Me.	Altruria
Lovejoy, Arthur L.	Pr.	Amherst
Madison, Lewis F.	Me	Sioux Falls
Madden, Ernest	Cl.	Worthing
Madden, Thomas C.	Aman.	Brookings
Markley, Charley E.	Se.	Ashton
Markrud, Christ	Py.	Lounsberry
Martin, Raymond	Ag.	Clark
Martinson, Nels A.	Cl.	Brookings
Mattice, Albert F.	Ag.	Sedro, Wash
Mathews, Alice	Ds.	Brookings
Mathews, Harry E.	Ag.	Brookings
Mathews, Roscoe A.	Me.	Brookings
Mathiesln, Otto F.	Cl.	Watertown
Mayland, Amy E.	Ds.	Brookings
McClain, Louis H.	Aman.	Parkston
McComb, Fred	Se.	Roanoke
McDonald, Mrs. J. J.	Ar.	Brookings
McElmurry, Loretta	Ds.	Brookings
McFarland, John R.	Se.	Mitchell
McGarry, Lawrence R.	Me.	Aurora
McNamee, Tom W.	Aman.	Rochester, Minn

Name.	Line of Work.	Address.
Melvin, Edward J.	Cl.	Cavour
Middleton, Mrs. J. W.	Ar.	Brookings
Miller, Paul E	Me.	Troy
Miller, Shirley P.	Ag.	Rockwell, Ia
Miner, Ina	Ar.	Sheffield, Ia
Miner, Rio	Pr.	Sheffield, Ia
Molstad, Henry	Pr.	Toronto
Moffatt, Margaret E.	Ds.	Brookings
Morehouse, Harry C.	Aman.	Brookings
Mork, Theo.	Me.	Brookings
Morrison, Freda C.	Ds.	De Smet
Morrison, Nellie J.	Mu.	De Smet
Morton, Frederick	Py.	Toronto
Mundt, Emil J.	Se.	Forestville, Cal
Munro, Stephen D.	Ag.	Gary
Murphy, Mark V.	Cl.	Fairfax
Murphy, Nona G.	Aman.	Brookings
Nelson, Charles H.	Cl.	Mt. Vernon
Nelson, Chrest	Dy.	Mitchell
Nelson, Chris.	Pr.	Dell Rapids
Nelson, John	Me.	Harlan, Ia
Nelson, Moremus	Pr.	Dell Rapids
Newby, Fred C.	Cl.	Parker
Newton, Charles H.	Cl.	White
Nix, Ralph E.	Ag.	Parkston
Noble, Alonzo	Me.	Manchester
Noble, Arthur G.	Ag.	Centerville
Norton, Rachel A.	Ds.	Beresford
Nyhus, Albert	Se.	Baltic
Nystrom, Gustaf A.	Pr.	Athelwold
Odekirk, Charles K.	Me.	Arlington
Oines, Nels	Pr.	Volga
Olander, Edward A.	Ag.	Stratfofd, Ia
Oldre, Martin	Pr.	Hardwick, Minn

Name.	Line of Work	Address.
Olsen, Andrew	Pr.	Plattsmouth, Neb
Olson, Anna M.	Aman.	Laurel
Olson, Daniel J.	Se.	Lamont
Olson, Gustava	Ds.	Colman
Olson, Herman O.	Pr.	Flandreau
Olson, Orrin O.	Pr.	Bruce
Omodt, Minnie A.	Pr.	Galla
Ortmayer, Franklin W.	Se.	Howard
Osman, James G.	Cl.	Estelline
Ostroot, Christine	Pr.	Lake Preston
Ostroot, Gabriel J.	Cl.	Lake Preston
Ostroot, Theodore	Pr.	Lake Preston
Otterness, Jens M.	Me.	Brookings
Owen, John L.	Me.	Erwin
Oyan, Bernhart	Se.	Baltic
Page, Warren J.	Py.	Hazel
Palmer, Frank C.	Pr.	Brookings
Pardis, Gustav A.	Se.	Bruce
Parsley, Cora M.	Pr.	Flandreau
Peirce, E Esther	Ds.	Brookings
Peirce, Robert E.	Me.	Brookings
Peirce, Ruth	Mu.	Brookings
Perry, Clyde B.	Se.	De Smet
Peterson, Ole L.	Se.	Hanson
Phillips, C. Louise	Ds.	Brookings
Phillips, Florence H.	Ds.	Brookings
Pickles, Chester E.	Py.	Clark
Pohlman, Henry W.	Me.	Huffton
Provine, Ruth E.	Ds.	Gettysburg
Purdy, Wallace E.	Aman.	Brookings
Ramsey, Henry	Ag.	Brookings
Reimer, Gustave	Ag.	Brookings
Reppe, John U.	Se,	Brookings
Rexford, Gertrude A.	Ds.	Aurora

Name.	Line of Work.	Address.
Ribstein, Blanche F.	Ds.	Bruce
Ribstein, Guy C.	Cl.	Bruce
Ripley, Hubert A.	Dy.	Ramona
Risum, C. Stella	Mu.	Montevideo, Minn
Riswold, Gilbert P.	Se.	Baltic
Ritchey, Maggie M.	Fu.	Casey, Ia
Rodee, Hiram A.	Ag.	Forestburg
Rogholt, Edward L.	Pr.	Volga
Ronning, Oscar F.	Ag.	Brookings
Roskie, Gertrude A.	Ag.	Montello, Wis
Roskie, Gertrude A.	Mu.	Montello, Wis
Rowen, Howard C.	Dy.	Parker
Rowley, Jairus E.	Se.	Mitchell
Ruane. Agnes	Mu.	Brookings
Running, Gustave	Pr.	Brookings
Ryan, Edward J.	Pr.	Ramona
Rydjord, Peter C.	Pr.	Lounsberry
Sampson, John A.	Cl.	Madison
Sanborn, Ethel I.	Ds.	Clear Lake
Sanderson, Nels F.	Pr.	Flandreau
Sayre, John M.	Se.	Beauclare
Schnaidt, Henry	Py.	Menno
Schroeder, Anna C.	Py.	Howard
Schwartz, Henry	Pr.	Ruth, Mich
Scott, Anton H.	Pr.	Henry
Seeley, James A.	Dy.	Bonilla
Seney, Fred	Dy.	Howard
Seward, Charles P.	Me.	Watertown
Shaw, Delwin H.	Ag.	Aberdeen
Shaw, Will B.	Me	Oldham
Shelstad, Sam H.	Cl.	Togstad
Sherwin, Ralph L.	Me.	Brookings
Schultz, Jennie	Aman.	Aurora
Shuman, Belle	Ds.	Brookings

Name.	Line of Work.	Address.
Simpson. Howard	Me.	Sioux Falls
Skarloken. Belinda	Pr.	Argo
Skinner, Guy E.	Me.	Brookings
Sloan. John	Ag.	Brookings
Smith, Mabel E.	Aman.	Bangor
Smith, William	Me.	Wilmot
Sneve, Severin C. M.	Pr.	Brookings
Solem, Ole O.	Se.	Prairie Farm
Soreng, Andrew O	Cl	Dexter
Stangeland, August	Se	Dell Rapids
Stark, Walter J.	Se.	Hitchcock
Stearns, Charlie H.	Cl.	Brookings
Stearns, Maude I.	Cl.	Brookings
Steiner, Fred W.	Aman.	Woonsocket
Stephens, Everett G.	Ag.	Foil Thompson
Stermer, Laura H.	Cl.	White
Stokes, Guy P.	Ag.	Flandreau
Stolte, Herman	Me.	Suderburg
Stubstein, Sam F.	Se.	Lennox
Svaren, Annie	Pr.	Volga
Svaren, Carrie	Pr.	Volga
Thogerson, Arthur A.	Se.	Yankton
Thogerson, Henry E.	Cl.	Yankton
Thomas, John C.	Py.	Freeman
Thompson, Clarence	Se.	Dell Rapids
Thompson, Edward F.	Pr.	Hazel
Thompson, George T.	Pr.	Dell Rapids
Thompson, James C.	Se.	Anchorage, Wis
Thompson, Thomas G.	Pr.	Dell Rapids
Thoreson, Arthur V.	Pr.	Clark
Thornber, Adam P.	Ag.	Brookings
Thornber, M. Edith	Ds.	Brookings
Throndson, Sophia	Pr.	Brookings
Tidball, Austin C	Py.	Brookings

Name.	Line of Work.	Address.
Torrence, Clark	Se.	Brookings
Towne, Ralph E.	Ag.	Mellette
Trooien, Ole N.	Me.	Prairie Farm
Trumm, Robert E.	Ag.	Hayti
Trygstad, Carl O.	Pr.	Brookings
Trygstad, Mary	Pr.	Brookings
Trygstad, Nils M.	Se.	Brookings
Tuck, George E.	Py.	Watertown
Tucker, Bertha B.	Pr.	Brookings
Tucker, Bessie	Pr.	Brookings
Tucker, Myrtie M.	Pr.	Brookings
Van Allen, Clover	Ds.	Gayville
Vanderveen, Clarence B.	Cl.	Wessington Springs
Walpole, Robert E.	Cl.	Yankton
Walsh, Nella R.	Py.	Mission Hill
Walters, Daisy M.	Ds.	Bruce
Warner, Thomas	Cl.	Elysian, Minn
Weaver, Edward L.	Me.	Rockwell, Ia
Webb, Lawrence A.	Pr.	Winnebago City, Minn
Welby, Mark E.	Se.	Mission Hill
Wendt, Henry F.	Se.	Mellette
West, John E.	Me.	White
Westcott, George R.	Me.	Goodwin
Wheaton, Louis	Dy.	Brookings
White, F. S.	Pr.	Dos Cabesos, Ariz
White, Robert J.	Cl.	White
Whitehead, Bower T.	P. G.	Brookings
Whitmus, Robert M.	Se.	Balaton, Minn
Wilcox, Claude G.	Se.	Gary
Williams, Callie	Ar.	Brookings
Williams, Daisy E.	Ar.	Brookings
Williams, Emma M.	Mu.	Weeping Water, Neb
Williams, Harry A.	Me.	Brookings
Williams, Josie	Ds.	Brookings

Name.	Line of Work.	Address.
Winegar, Laura	Ds.	Brookings
Wolf, Lewis E.	Me.	Grover
Wood, Sam J. T.	Pr.	Woodburn, Ill
Woodley, Elmer E.	Cl.	Worthing
Woodley, Le Roy W.	Cl.	Worthing
Woodward, Lottie	Mu.	Wilmot
Yager, Albert E.	Pr.	Wentworth
Young, Alfred J.	Py.	Athol

Total Enrollment,.....446

Total 446

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Guy P. Stokes,.....Business Manager.

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C. L. Kennedy,.....Treasurer.

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GUSTAVE REIMER, SECOND LIEUTENANT, 1ST S. D. V.,
Acting Commandant.

COMMISSIONED STAFF.

Samuel E. Johnston,.....Major.
Ralph S. Sherwin,.....1st Lieut., Adjutant.

NON-COMMISSIONED STAFF.

Kenneth Humphrey,.....Srgt. Major.
George R. Westcott,.....Color Srgt.
L. E. Hendricks,.....Musician.

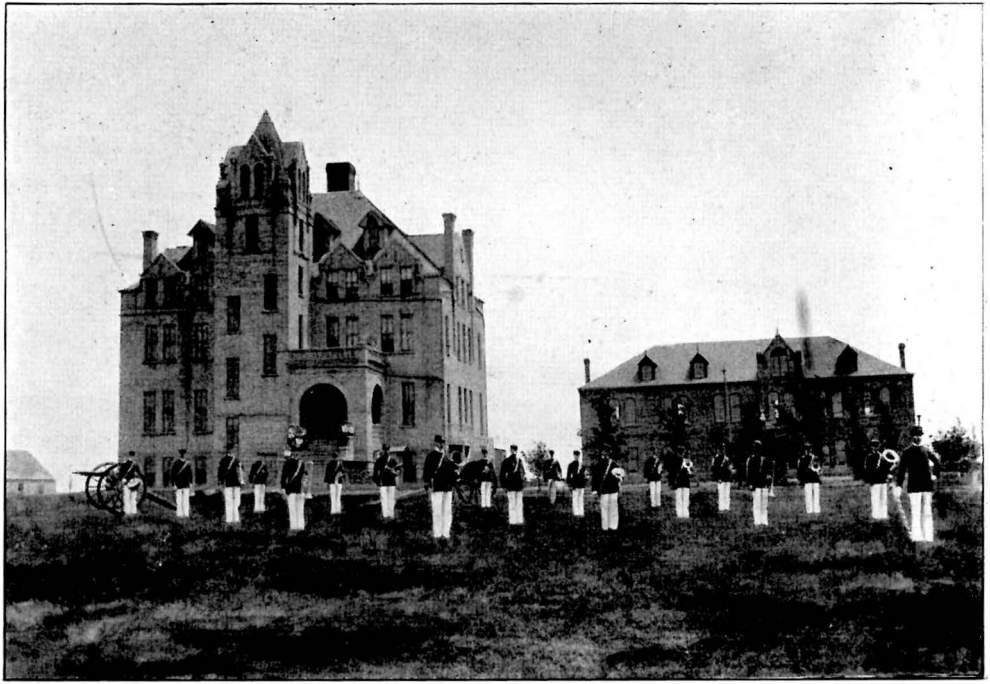
INFANTRY.

COMPANY A.

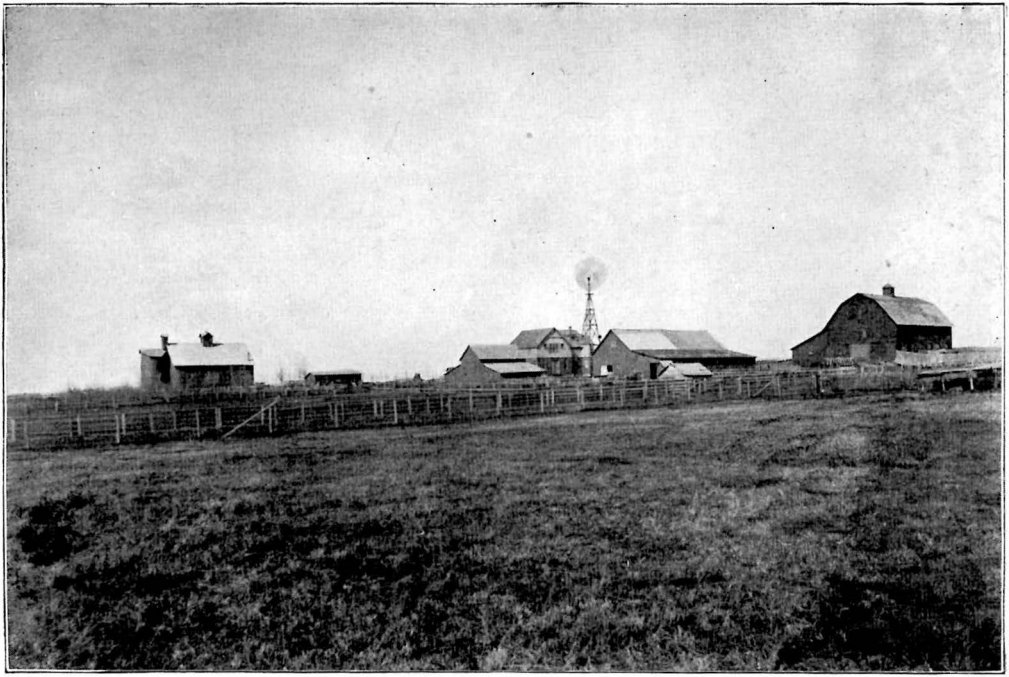
Ole N. Trooien,.....Captain.
Ralph S. Sherwin,.....1st Lieutenant.
Henry Ramsey,.....2nd Lieutenant.
Earl Jenks, T. McNamee, Ross Johnson, Perry Loucks, Srgts.
C. W. Davis, Wm. Shaw, A. A. Jarratt,.....Corporals.
L. E. Hendricks,.....Musician.

COMPANY B.

M. L. Erickson,.....Captain.
A. G. Johnson,.....1st Lieutenant.
Lawrence McGarry,.....2nd Lieutenant.
A. P. Thornber, S. H. Jarvis, R. E. Trumm,.....Sergeants.
C. E. Pickles, Richard Bielski, F. W. Ortmayer,....Corporals.
H. A. Williams,.....Musician.

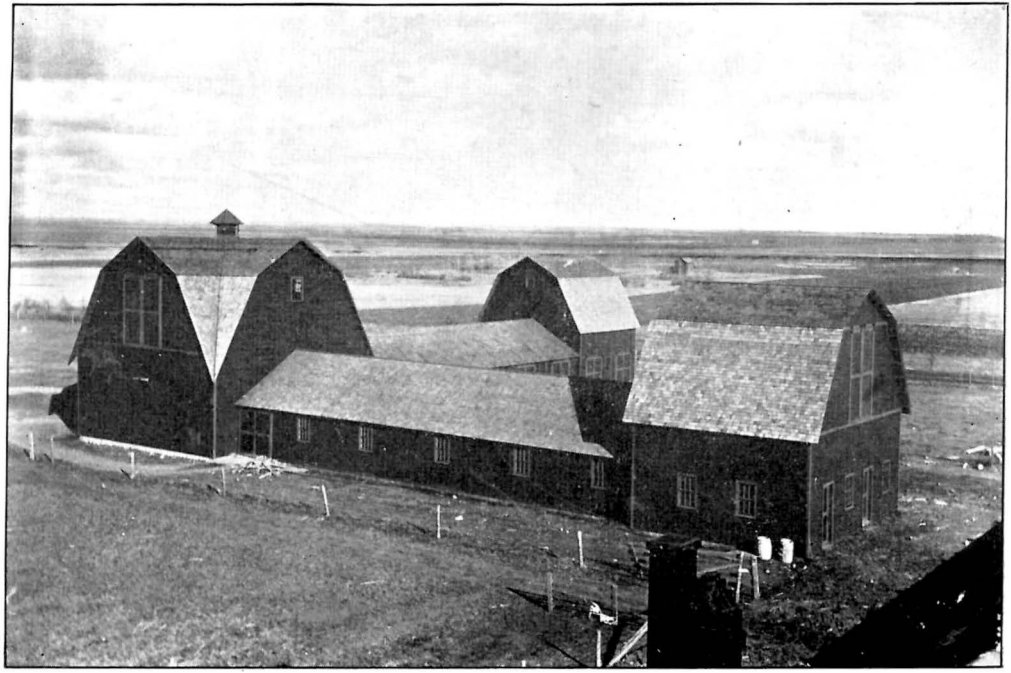


THE COLLEGE BAND.



THE GIRLS' COTTAGE.

JUDGING STOCK.



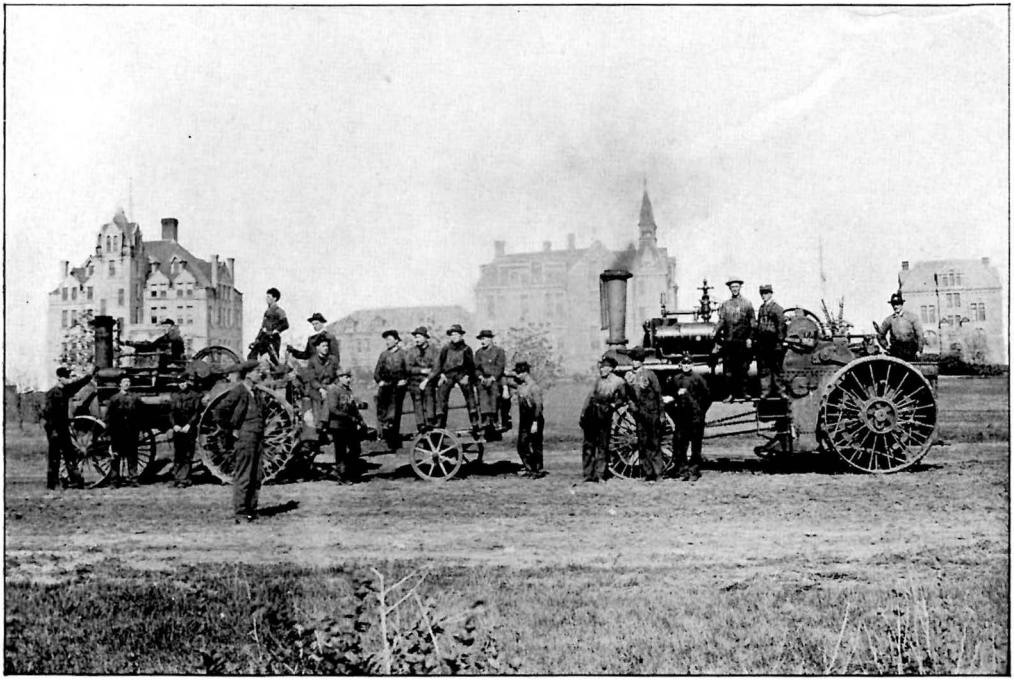
THE SHEEP BARN.

THE CREAMERY.

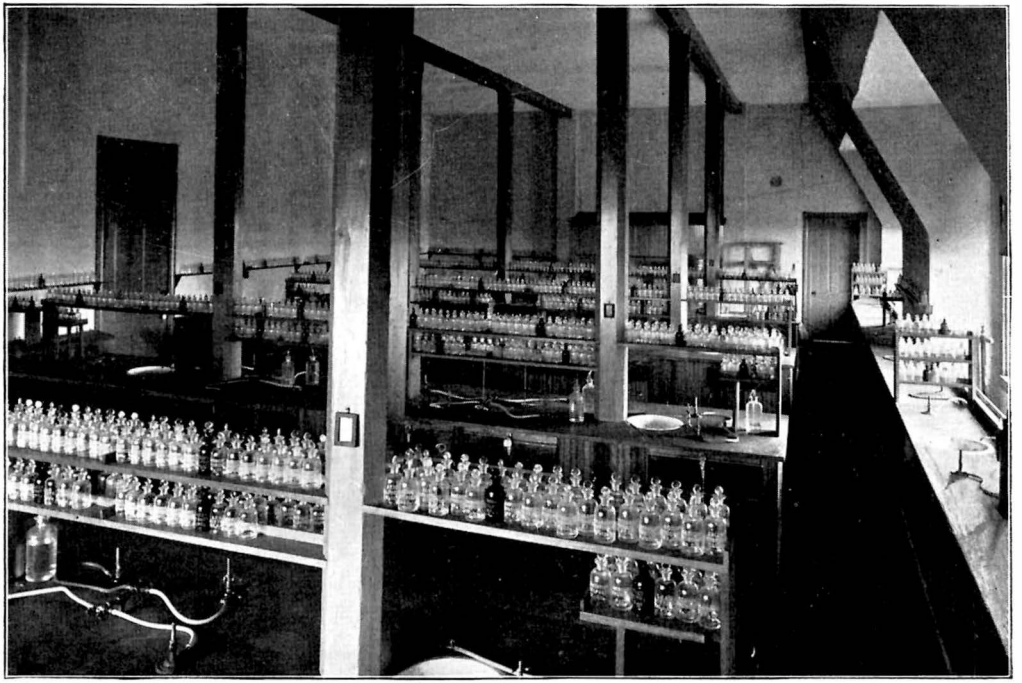
THE FORCING-HOUSE.

THE BOTANICAL LABORATORY.

THE GREENHOUSE.

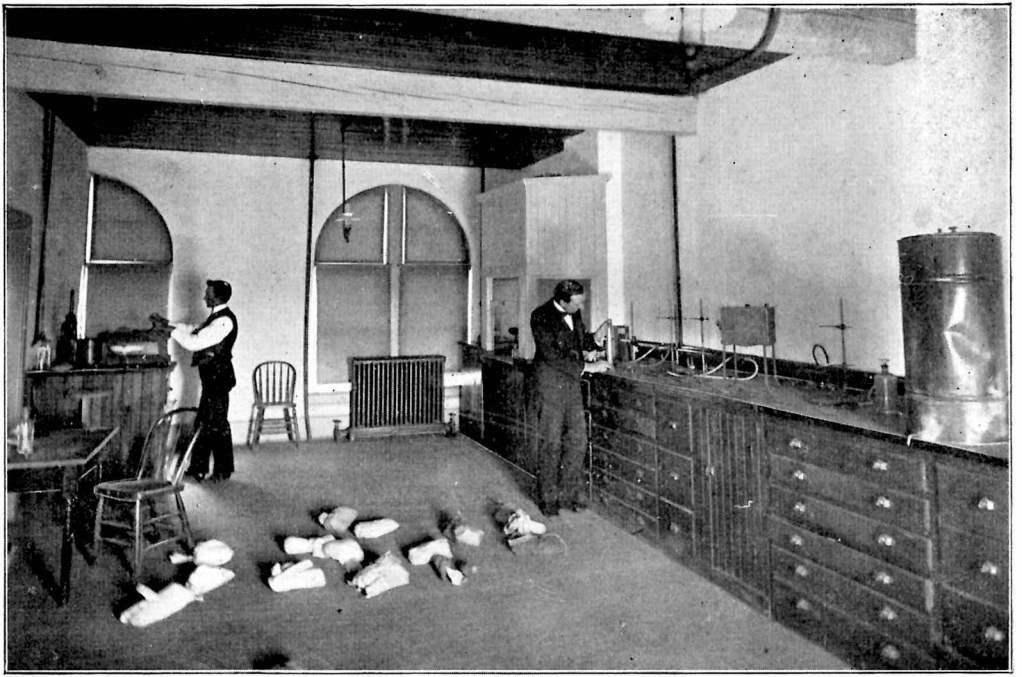


ENGINE PRACTICE. (The J. I. Case Engine.)

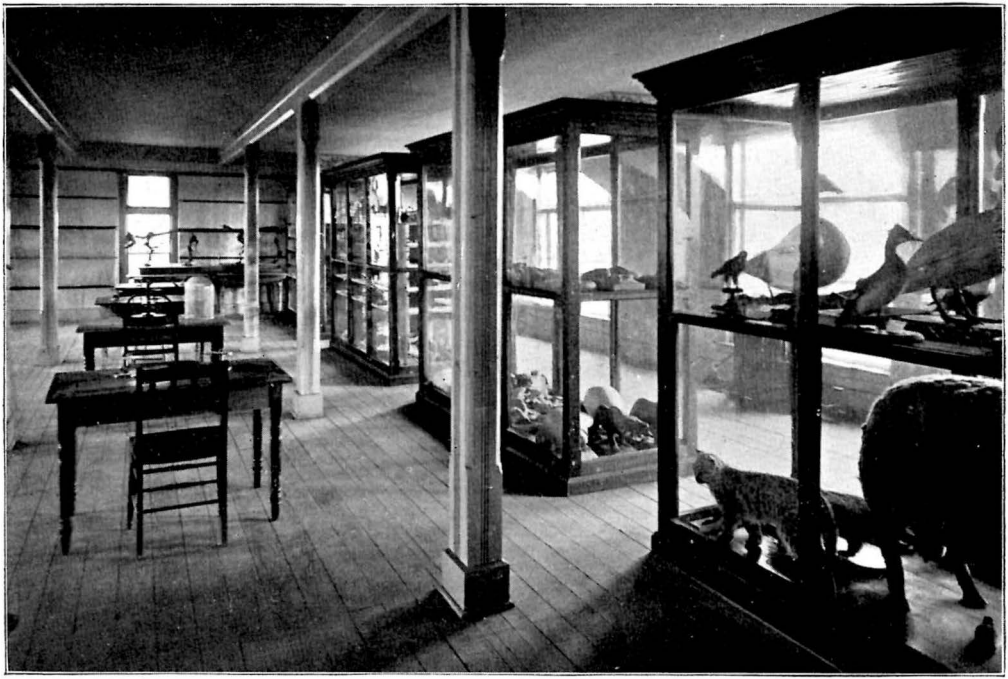


THE CHEMICAL LABORATORY.

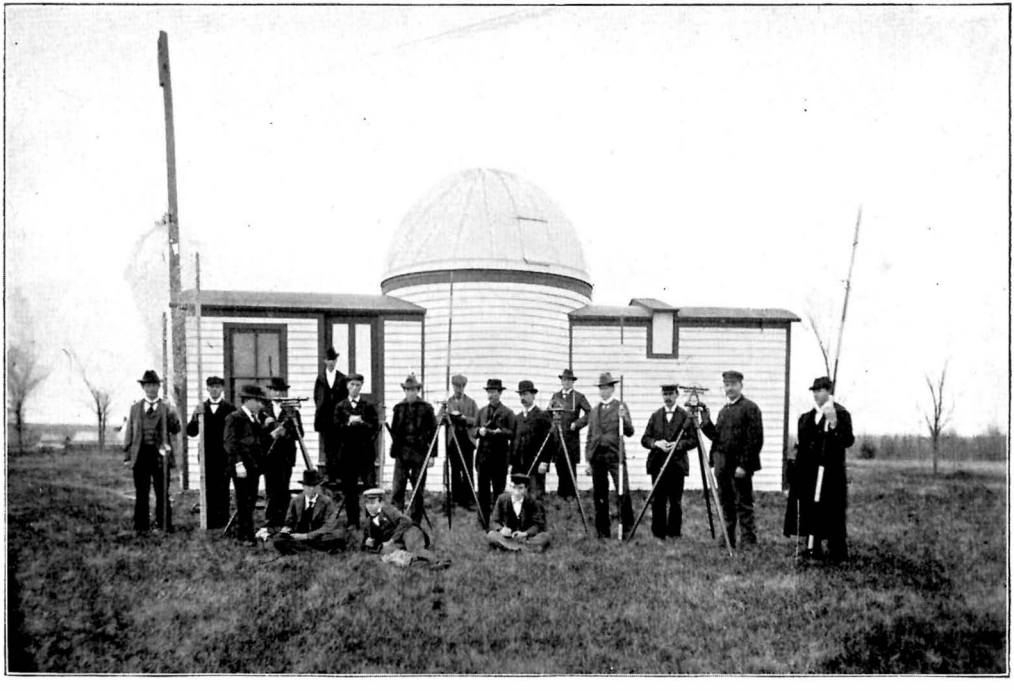
THE SOIL PHYSICS LABORATORY.



THE EXPERIMENT STATION CHEMICAL LABORATORY.

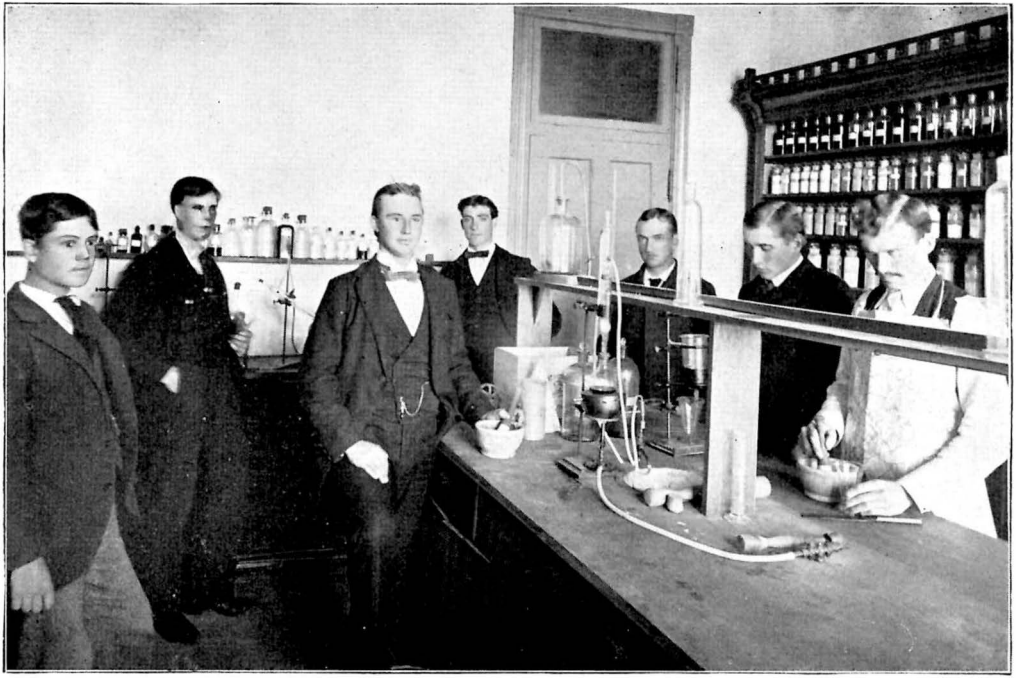


THE ZOOLOGICAL LABORATORY

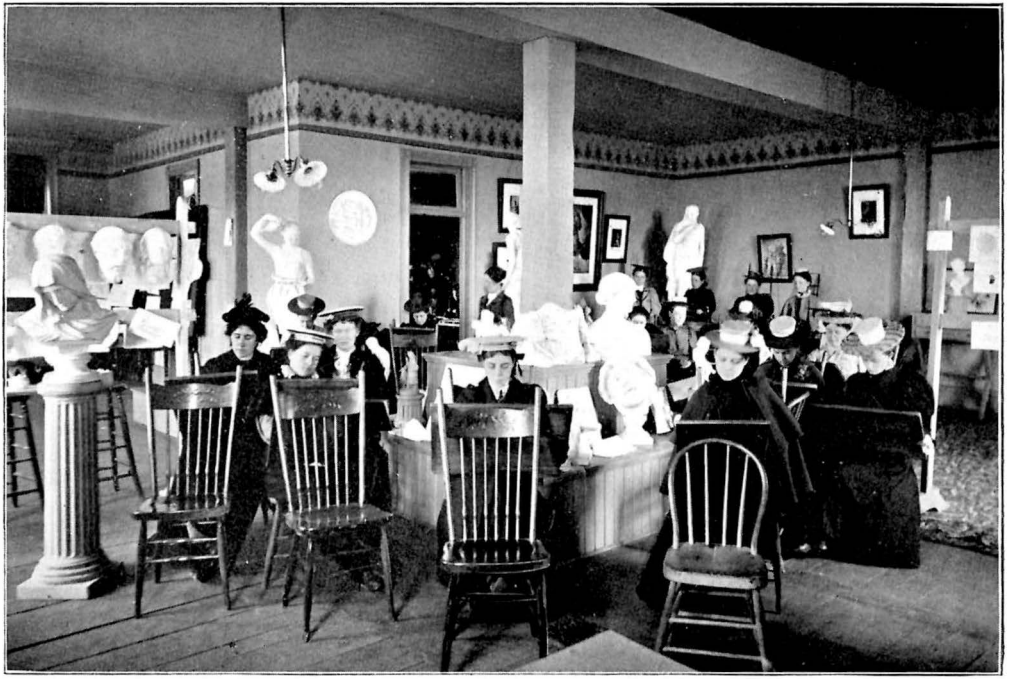


A Field Surveying Party.

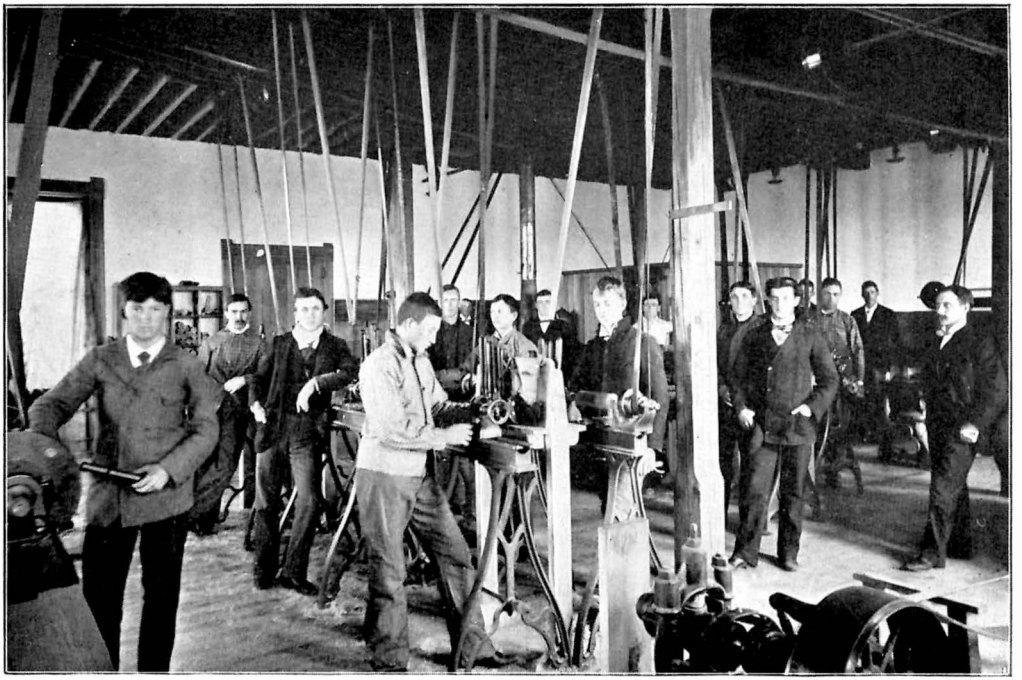
THE GENERAL PHYSICAL LABORATORY.



THE PHARMACEUTICAL LABORATORY.

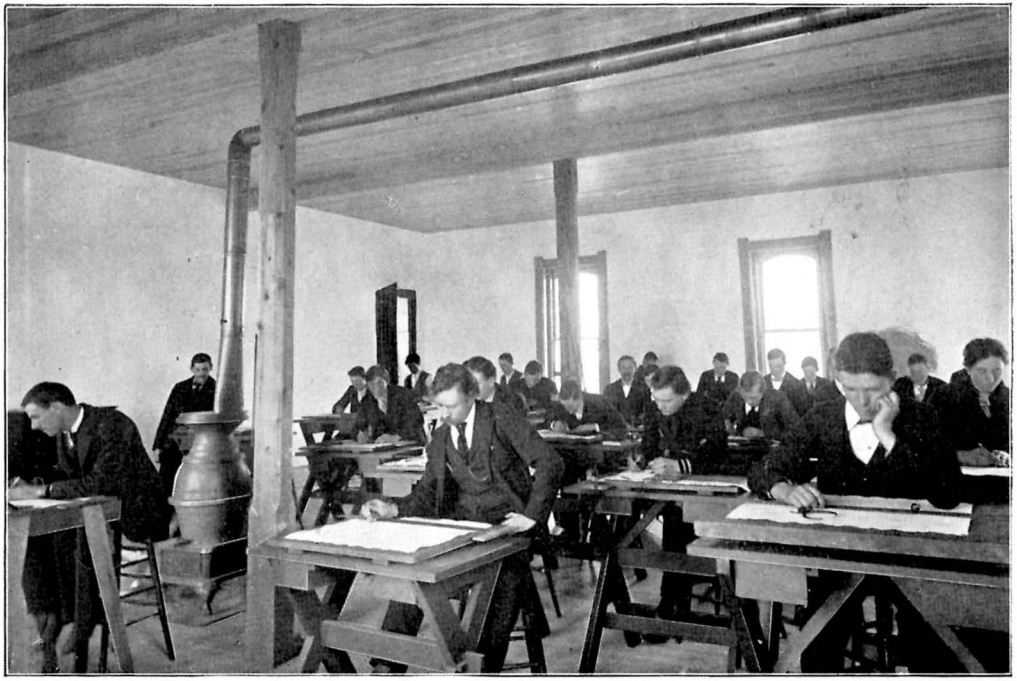


THE INDUSTRIAL ART DRAWING ROOM.

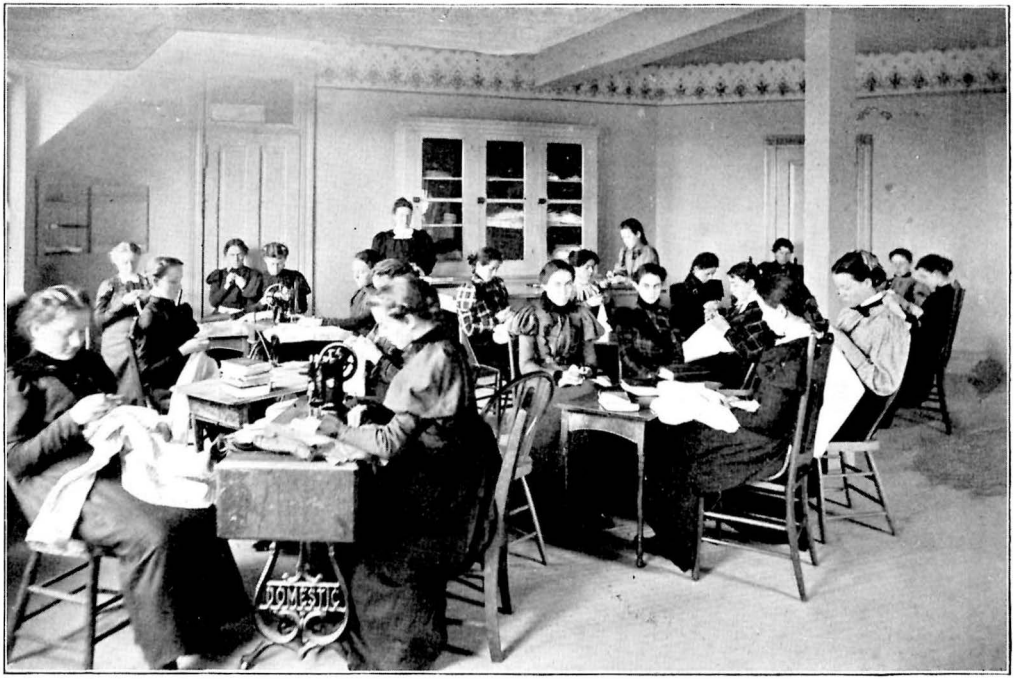


THE MACHINE SHOP.

THE ADVANCED PHYSICAL LABORATORY.

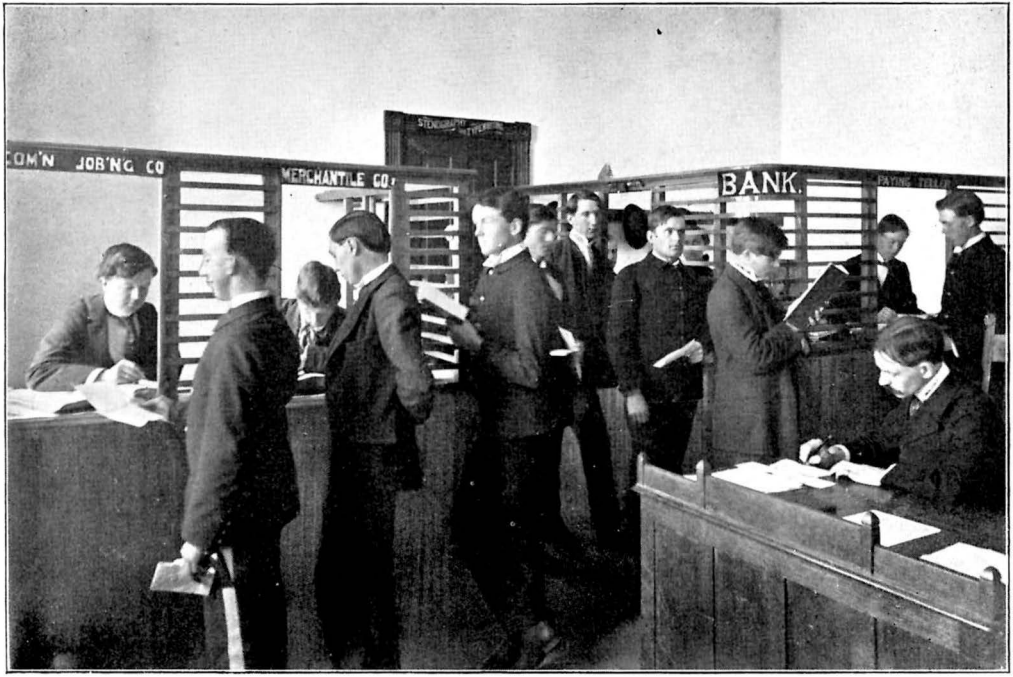


THE MECHANICAL DRAWING ROOM.



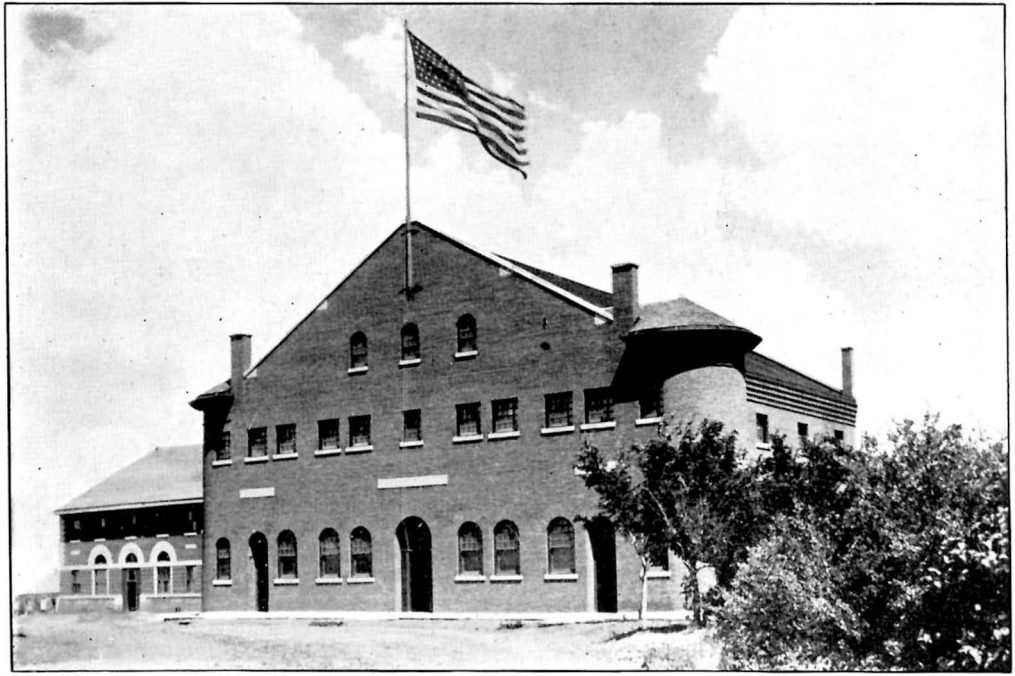
THE SEWING ROOM.

THE COLLEGE LIBRARY.

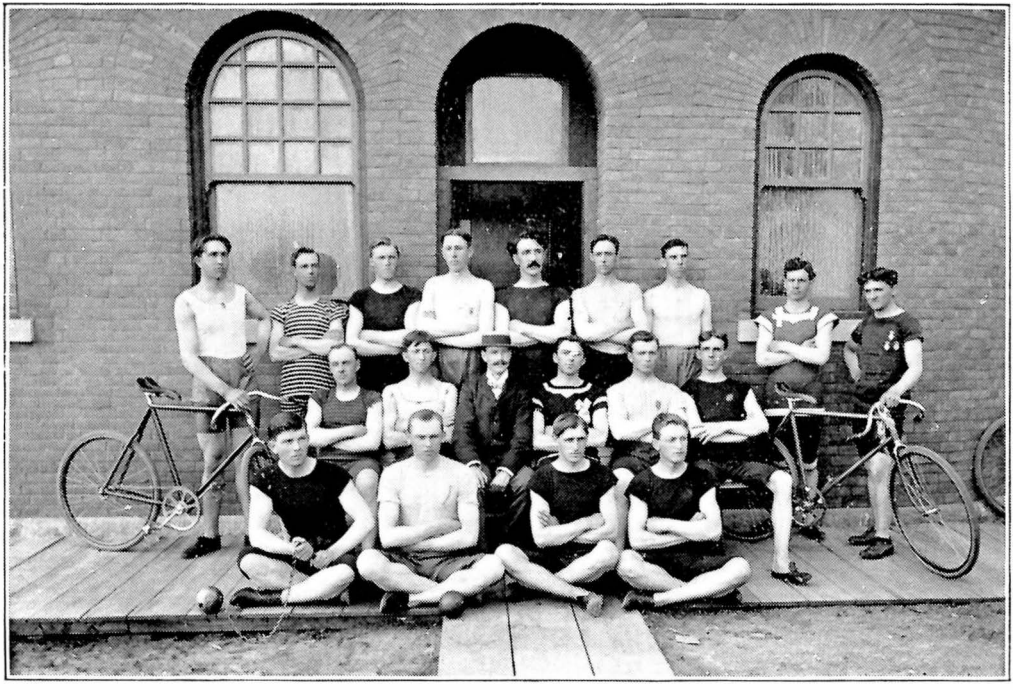


THE BUSINESS PRACTICE ROOM.

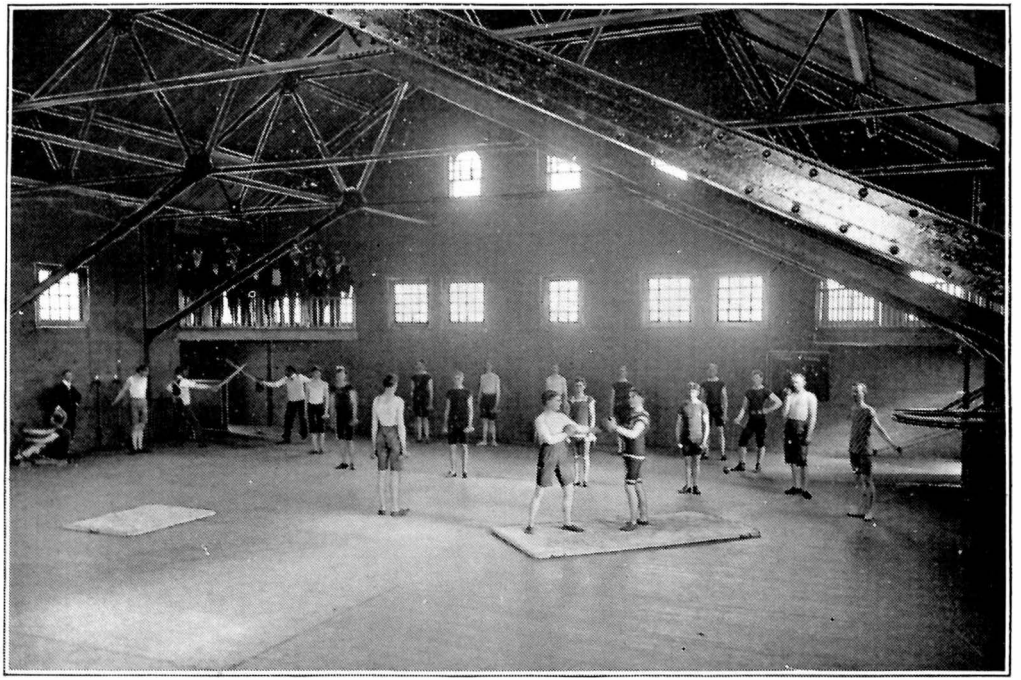
THE GIRLS' STUDY.



THE NEW DRILL HALL AND GYMNASIUM.



THE TRACK TEAM.



A View of the Interior of the Gymnasium.

THE BASKET BALL TEAM.

THE BASE BALL TEAM.

PART THREE.

GENERAL STATEMENT.

A.--HISTORICAL.

1. ESTABLISHMENT —An act of Congress approved July 2nd, 1863, gave to each state 30,000 acres of public lands for each representative in Congress toward "the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." In compliance with this act the territorial legislature of 1881 passed an act establishing an agricultural college at Brookings in the territory of Dakota.

The legislature of 1883 provided for the erection of the first building. This building, now known as the central building, was built in 1884.

Upon the division of the territory of Dakota into the states of North and South Dakota when admitted into the Union in 1889, the agricultural and mechanical college of Dakota became known as the South Dakota Agricultural College.

2. PURPOSE.—The college is devoted to advancing the interests of practical education and its purpose is to give men and women such training as will best fit them for the active duties of life, whether it be in the fields, the shops, the house, or in the class or counting rooms.

In the act of the legislature establishing the institution it was designated "The Agricultural and Mechanical College" and in the Congressional Act these colleges were spoken of as "of Agricultural and Mechanic Arts," and while the school

is popularly called the "Agricultural College" the mere precedence of the term does not make it more agricultural than mechanical. While the work of the institution is largely scientific it is of such a diversified character that it makes the student feel that he can pursue work along almost any line which his tastes dictate. The aim of all the work offered is to fit young people to occupy ably any position they may be called upon to fill; and to make better and more intelligent citizens of them.

A constant effort is made to reach the masses of the people in the state and interest them in the application of science to industrial pursuits and in the more general improvement of their home life and every day activities.

3. LOCATION.—The College is located in the east central part of the state, upon an eminence one mile from the business center of the city of Brookings and four miles from the Big Sioux river.

Brookings has a population of nearly two thousand five hundred thrifty, intelligent and hospitable people. Its streets are lined with trees and there are very few houses where there are not well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the "city of homes."

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one. While in the general election of 1896 Brookings county was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state.

It is situated on the Central Dakota division of the Chicago & North-western railway and three miles from its junction with the Watertown branch of the same road which makes connections with the main line at this point.

4. Sources of Income.—By the Congressional act under which South Dakota became a state, one hundred and sixty thousand acres of land were set aside as an endowment for the South Dakota Agricultural College. These lands are not yet quite all selected and none have as yet been sold. A small amount is now being received yearly as rental from the selected lands.

No school lands can be sold for less than ten dollars per acre so that these lands when sold, will probably yield an endowment of two million dollars, the interest from which will be sufficient for the needs of the college.

The "Morrill Act" passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of Agriculture and Mechanic Arts" Under this act the college receives from the general government $15,000 for the first year; $16,000 for the second; $17,000 for the third; and so on until the annual amount reaches and remains at $25,000 during the pleasure of congress.

The "Hatch act" passed by Congress provides for the establishment of Agricultural Experiment Stations in connection with Agricultural Colleges and allows $15,000 per year for the maintenance of the same.

The state legislature makes biennial appropriations for the support of the college. Its last appropriation for this purpose was *fifty-eight thousand dollars.*

5. General Policy.—It is the policy of the institution to make itself in truth a part of the common school system, first, by continuing the work of the young people from the point in their education where the lower school stops, thus giving them an opportunity to become liberally and practically educated within the boundaries of their own state; second, by assisting in the training of public school teachers, especially in the various sciences.

The college also desires to assist, as far as its resources will allow, in the self improvement at their homes, of the peo-

ple of the state. To this end where half a score or more intelligent persons express a desire to study along some definite line, they will be advised as to the course of reading to pursue, and, if possible, be furnished with a lecturer for one or more lectures after such reading has been faithfully completed. These home reading courses are in print and may be obtained upon application to the President. It is believed that this reading course is a more systematic, logical and effective method of outside instruction than promiscuous farmers' institutes where the attendance as a rule is largely made up of those who have no especial preparation and are present solely to be entertained.

The college does, however, conduct farmers' institutes where proper preparation is made and the attendance is likely to justify such an undertaking. In all cases the college makes its best efforts to impart useful information, whether it be by means of publications, its instructors, or its correspondence.

6. EXPERIMENT STATION.—This department is organized under the Hatch Act of Congress which appropriates fifteen thousand dollars from the United States treasury each year for its maintenance.

"It shall be the object and duty of said experiment stations to conduct original researches and verify experiments on the physiology of plants and animals,"—enumerating some twenty other lines of research,—"and such other experiments bearing directly on the Agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states. To aid in acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with Agriculture." The South Dakota station conducts its investigations principally upon the following lines: Live stock, soils, field experiments, green house work, trees and small fruits, chemistry of plant growth and foods, and economic botany, entomology and zoology.

In planning the work of the station the main object sought is to assist the agricultural interests of the state. Education is derived from this in two ways, first, from the student's observation of the actual work, second, by reading the accounts and results of the work which are published in the form of bulletins and are available to any one applying.

B.--EQUIPMENT.

1. CAMPUS.—The College Campus of thirty acres is beautifully located on an eminence within the corporate limits of Brookings. Under charge of the Horticultural department the campus, ornamented with a choice and tasteful variety of trees and shrubs and laid out with necessary drives and walks, is a good example of landscape gardening. Adjoining on the rear is a fifty acre plat which is devoted to Horticultural gardens and the United States foresty experiments.

This portion is laid out regularly in suitably sized plats with longitudinal streets at appropriate distances apart, thus giving a beautiful and symmetrical effect to the observer from the college buildings.

2. BUILDINGS.—The oldest building on the campus, known as the "Central Building," was completed in 1884. It is constructed of brick and stone and is devoted entirely to administrative and instructional purposes. The basement contains the boys' study and toilet rooms, offices of the "Collegian" and the Young Men's Christian Association, two class rooms, besides several other offices and rooms. On the first floor are the administrative offices, the library, faculty room and one class room. The second floor contains the Commercial depart-

ment, and three other large class rooms. The departments of Chemistry and Pharmacy occupy the third and upper floor.

The "South Building," the next one on the campus, is a three story brick and stone building devoted to the experiment station work and to the departments of Botany and Zoology. In the basement and on the first floor are the various station laboratories and offices. On the second floor is the Botanical class room, herbarium and laboratory. On the upper floor is located the department of Zoology with its various laboratories, class rooms and offices.

The "North Building," completed in 1888, is a four story brick building. The basement is used for a girls' study and retiring rooms and for the department of Physics consisting of laboratories, lecture, apparatus, office and dark rooms. The first floor is given up entirely to an assembly room seating about four hundred people. The second floor is given up to the departments of Art and Music, with the various drawing and practice rooms, offices and studios. The Domestic Science department occupies the third floor with its large sewing, cooking and dining rooms and kitchen. The girls' cottage is described under "4."

The "Horticultural Building" is a one story building of brick and wood, in which are the laboratories, class rooms and offices of the department. The green and forcing houses are adjoining.

The "Mechanical Hall," erected in 1897, is a two story brick building, containing the various shops, drawing, lecture and office rooms of the Mechanical Engineering department.

The "Drill Hall," which has been completed during the year, is a two-story brick building. The upper floor is used as drilling place for the cadets in the winter season, and as a gymnasium for the boys. The lower floor contains the girls' gymnasium, offices, bath and toilet rooms

The "Creamery," which has also been recently completed, is a two story brick building. The upper floor is given up to

class rooms and office, and the lower floor is elaborately fitted out with modern equipment.

3. FARM.—Set apart as the college farm is a tract of three hundred and twenty acres near the campus, about fifty acres of which is used by the Agricultural Experiment station as an experimental farm Here the field experiments with field crops, seed germination and soil preparation are conducted and the student electing it can witness and actually participate in this scientific work. The remainder of the farm is carried on as a model stock and dairy farm under the direction of the professor of Animal Husbandry. Practical work and experiments involving the best farming practices for this region are given the students.

4. DORMITORIES.—Originally the institution provided dormitories for both sexes but the demands for instructional purposes have increased so much more rapidly than the state has furnished means for new buildings, it has been necessary to convert the dormitories into rooms for the departments so that now the college undertakes to furnish quarters for about twenty young ladies only, in what is known as the "Girls' Cottage," a two story wooden building situated just west of the campus. The rooms are large, pleasantly situated, conveniently arranged and heated with hot water and hot air systems.

5. LABORATORIES.—The work done by the institution is so largely scientific in its nature that in order to use the most modern and approved methods it is necessary to provide laboratories for a large majority of the different departments.

The farm with its various well planned and stocked barns serves as one very practical laboratory for the department of Agriculture. The soils are physically and chemically studied in other separate laboratories. The Green House and Horticultural Gardens serve in a like capacity for the Horticultural department. The Biological departments are each provided

with adequate laboratories and necessary auxiliary rooms on the upper floors of the South Building. The chemical laboratory and offices of the experiment station occupy the larger part of the first floor of the same building. On the top floor of the Central building is located the entire instructional departments of Chemistry and Pharmacy including a general qualitative laboratory for one hundred students, a quantitative laboratory which accommodates twenty-five students, a pharmaceutical laboratory for twenty students, and the necessary apparatus, store and weighing rooms. On the second floor of the same building are the actual business practice rooms of the Commercial departmet. On the upper floor of the North building the Domestic department is provided with a large kitchen, sewing room, model dining room and pantry, sufficient for the accommodation of seventy-five students. The second floor is divided into apartments for the Art and Music departments. In the basement are the general and advanced Physical laboratories with their necessary stock, apparatus and dark rooms The mechanical laboratories are in the new Mechanical building, and include a machine shop equipped for twenty students, a wood shop equipped for thirty students, a forge shop equipped for twenty students and a drawing room equipped for thirty-six students. The Dairy building contains an engine, milk tanks, pumps, separators, testers, churns and other appliances of the modern creamery, and furnishes instructional facilities for a large number of students. The Astronomical observatory, together with a complete outfit of surveying instruments, serves as a laboratory for the Mathematical department.

6. GYMNASIUM.—The spacious gymnasium for the boys and the commodious physical culture rooms for the girls are well equipped with dumb-bells, indian clubs, chest weights and other apparatus; to these will be added parallell bars, a horizontal bar, bicycle trainer and other articles in the near future. Both of these departments have connected with them

bath and toilet rooms of the most approved design, and the physical training is under the direction of competent instructors.

7. LIBRARY AND READING ROOM.—The library occupies rooms on the first floor of the Central building and contains about six thousand bound volumes and as many pamphlets. The institution being a repository for the Government, it contains quite a number of the governmental publications. Care has been exercised in the selection of books, in order that each department may have proper books of reference at the disposal of the students taking work in that line. The books are arranged according to the Dewey system of decimal classification, and the card catalogue has been completed up to date, thus facilitating the use of the library. The reference portion is well supplied with proper books of reference. The files of all the standard, scientific and literary magazines are kept bound. The reading room portion is supplied with the leading periodicals and newspapers. The library is nearly all the time, day and evening, at the disposal of the student for the purpose of study and reading.

8. MUSEUMS.—The idea that museums are valuable as educational factors only as they furnish illustrative material for study, has obtained in the collection of the various specimens and their arrangement in the several department museums. The Zoological, Botanical, Geological, Art, and Engineering departments have made especially good beginnings in getting together material for that purpose. Constant additions are being made, thereby increasing their worth as adjuncts to laboratory work. The different collections are now kept in the departments to which they belong. Permanent and commodious rooms for the museums are projected and it is hoped they will materialize in the near future.

9. GENERAL STUDY ROOM.—A general study room for the young ladies, in conjunction with the necessary retiring

rooms and toilet facilities, occupies part of the basement of the North building. The ladies of Brookings have very generously furnished part of the fittings necessary to its home like appearance. The young gentlemen are also provided with similar rooms in the basement of the Central building. The institution furnishes first class postal facilities in each of these rooms.

10. OFFICES.—The president's and registrar's offices are on the first floor of the Central building and at the left of the main hall. The secretary of the faculty's office and general faculty room are entered from the main hall. The secretary's and business office is at the end of the same hall. Nearly all the heads of departments are provided with offices in connection with their departments.

11. LECTURE AND CLASS ROOMS.—The class rooms are fitted to accommodate from thirty to fifty students each. Lecture rooms are fitted with arm rest chairs for ease in taking notes. The main lecture or assembly room is provided with opera chairs for seating about four hundred, and a fine electric dissolving projection lantern for illustrative purposes.

12. SANITARY CONDITIONS.—Recently efforts have been directed to improving the sanitary conditions about the campus. The old methods have been superseded by sanitary plumbing throughout the buildings and a new sewerage disposal plant. The water supply is one of the very best, the water being of good quality and very pure. The rarity of zymotic and infectious diseases during the past year is a proof that the sanitary conditions are excellent.

13. HEATING.—Good heating arrangements are a necessity in almost any climate but in a cold climate their importance increases. The main buildings are all heated with steam generated in a central heating plant. This plant also furnishes steam for running the machinery in the shop and generat-

ing electricity for lighting. Largely for purposes of cheerfulness and ventilation, fireplaces are provided in all the offices.

14. LIGHTING.—The college owns and controls its own electric light plant, thus making the light at all times available and economical. Many of the rooms and all the laboratories are provided with gas, which for purposes of illumination is used in Wellsbach burners, making a brilliant light.

C --ADMINISTRATION.

1. GOVERNING BOARD.—By an act of the Legislature approved March 10th, 1897, provision was made for the appointment of the "Regents of Education," to have charge of all the educational institutions of the state.

The law is, "The Governor, by and with the consent of the senate, shall appoint five persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated the regents of education." The terms of office of these regents, when first appointed, are of different lengths and after the first terms, are each six years, thus making it a continuous body. Vacancies are filled by the Governor during recesses of the senate. "The board shall organize by electing one of their members president, and by the election of a secretary. Thus qualified and organized they shall have authority to make such rules as are necessary for their own government as a board and shall immediately assume the exclusive control and management of all the educational institutions which are maintained either wholly or in part by the state." Along this line the powers and duties of

the regents are defined, among which important ones may be mentioned, to employ or dismiss members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and term of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of the students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplications of departments, to confer degrees, to control the United States experiment station, and to promote education among the farmers by providing for institutes, in fact to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the college largely through a regent committeeman.

2. FACULTY.—The faculty consists of the president and professors, all of whom are elected by the regents. The professors are heads of the departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. In order to aid the president in his executive duties, he appoints, at the beginning of each college year, certain faculty committees, which take up such work as may be assigned them by the president and faculty and thus greatly facilitate the transaction of business and economize the time of the faculty. In the absence of the president the chairman of the executive committee or the ranking member of that committee present, will act in his place. (For list of committees for 1900-1901, see page 11).

3. DEPARTMENTS.—The educational and experimental work is performed by the following departments, the heads of which are responsible to the president of the college for the work done in their individual departments. Each department will usually, hereinafter, be known by the abbreviation affixed

The work and equipment of each is described in detail under Part IV.

DEPARTMENTS.	ABBREVIATIONS.
Agriculture	Ag.
Botany	Bt.
Chemistry	Ch.
Commercial	Cl.
Dairying and Animal Husbandry	Dy.
Domestic Science	Ds.
English	Eh.
Experiment Station	Ex.
Geology and Agronomy	Gl.
History, Economics and Philosophy	H-P.
Horticulture	Ho.
Languages (French, Latin and German)	Ln.
Mathematics and Astronomy	Ms.
Mechanical Engineering	Me.
Military	Mt.
Music and Physicial Culture	Mu.
Pharmacy	Py.
Physics	Ph.
Preparatory	Pr.
Zoology and Veterinary Medicine	Zo.

4. TERMS AND VACATIONS.—The regular work of the college is carried on continuously during the Fall, Winter and Spring terms, which are designated in the schedule as F. W. S. The principal vacation of the year occurs in the Summer, from the last of June nearly to the close of September. The work of the Fall term begins In 1901 on September 26th, and continues until December 19th, a period of twelve weeks of five days' work each. The Winter vacation will begin at noon on December 19th, and last until noon January 2nd, 1900, when the work of the winter term will begin. This Winter term will last from January 2nd, to March 27th, a period of twelve weeks of five days' work each. The Easter recess, or Spring

vacation. will occur from noon of March 27th, to noon of April 3rd, 1901, when the work of the Spring term will begin. The Spring term continues twelve weeks, of five days' work each, and ends on June 27th, after all the exercises of Commencement week are completed. The dates indicated as the time when a term will begin refer to the day that recitation and laboratory work is begun. The matter of classifying should all be arranged before these dates and such provision is made in the calendar announcements.

5. INTERNAL GOVERNMENT.—The faculty determines the general policy of the college. In the matter of students' control at the college, the widest latitude consistent with good work, good order and good moral atmosphere is allowed. Students, especially those wearing the uniform of the cadet, are expected to conduct themselves at all times in a manner which will reflect credit upon themselves and the institution they represent. Any student of the college who flagrantly shows disrespect for order, morality, personal honor and the rights of others will promptly have his relationship with the college severed.

6. RELIGIOUS EXERCISES.—Attendance on no religious exercises is required. The Young Men's and Young Women's Christian Associations are important elements in retaining a strong Christian fellowship among the student body. Their relations to the State and Inter-National organizations assist in keeping the college in touch with other educational institutions. Instead of the faculty holding daily chapel exercises and requiring attendance these student organizations are allowed to take the religious lead by holding prayer and devotional meetings nearly every day to which all are invited.

7. STUDENT AFFAIRS.--Students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical and social organizations. The faculty, in all these matters, retains an advisory interest and aims to assist the students in every way possible in mak-

ing these elements especially helpful to the student body as a whole. In the matter of social enjoyments the faculty is disposed to allow a reasonable amount of time for recreation, and endeavors to contribute as far as possible toward making the students happy and contented.

8. REQUIRED EXERCISES.—There are certain requirements in the way of work exacted of every student, among which are military exercises, physical culture and rhetoricals. These subjects are thought to be of sufficient importance that every student can take them with profit.

9. STUDENTS' LIVING ARRANGEMENTS.—The faculty maintains the right to pass upon the living arrangements of every non-resident student. Residents of the town with whom students are boarding or lodging are requested to co-operate with the faculty in the efforts to improve the general conditions of the students by exercising over them a careful supervision and reporting to the faculty any misconduct on the part of the students which may come to their notice. Upon coming to Brookings students should report at once to the President, who will furnish all possible information with reference to their living arrangements.

10. STUDENT CONDUCT.—The chief end of school life being to obtain thorough mental and moral discipline, it becomes incumbent upon the faculty to make the conditions as far as possible conducive to that attainment. No set regulations are expected to cover every contingency arising but it is necessary that all students recognize the fitness and importance of such restraints as are in force, and co-operate in securing their observance. In the absence of any rule applying, the student's own good judgment should suggest the proper procedure. Deportment is more fully treated under "D."

11. TUTORING.—Students absent from class or college exercises or otherwise being unable to keep up with the work

of their classes, will at the suggestion of the head of the department arrange with a regular tutor of that department for assistance.

D.--SPECIAL INFORMATION FOR STUDENTS.

1. TIME TO ENTER.—Students are admitted at any time and assigned to such classes as they are found best fitted to enter, but it is much better to commence at the beginning of the college year or as soon thereafter as possible. No reduction in college fees is made when the student enters after the beginning of a term, and if a student enters late he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor to assist him in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

2. EXPENSES OF STUDENTS.—No young person should be deterred from obtaining a liberal education when such advantages as this college offers can be had at a nominal price. The aggregate of all the regular fees is only four dollars per term and is payable at the time of registration. Books and stationery are furnished by the student. A laboratory fee of one dollar per term is charged for the use of each laboratory in which a student takes work. An estimate of the yearly expenses of a student is given below in three grades, viz:

	LOW.	AVERAGE.	LIBERAL.
Tuition,	$ 6.00	$ 6.00	$ 6.00
Incidental Fees,	6.00	6.00	6.00
Board and Room,	75.00	90.00	120.00
Laundry,	12.50	15.00	25.00
Books and Stationery	15.00	25.00	35.00
Laboratory Fees	0.00	2.00	5.00
Total	$114.50	$144.00	$197.00

Male students are expected to purchase uniforms, which range in cost from $12.00 to $18.00, and female students must

furnish themselves with special costumes, which are not necessarily expensive, for use in physical culture Any fairly prudent student can pay all his expenses, including cost for clothing and traveling, with $150.00 per year.

3. LIVING ARRANGEMENTS.—The institution does not provide other dormitories than the girls' cottage, which has sufficient rooms for about twenty girls, who are constantly under the charge of a competent matron. In connection with the cottage a club is run under the supervision of the college, which is able to furnish table board to about forty students, at a cost approximately of $2.25 per week.

Good rooms can be secured in the city at private houses or hotels for 50 cents per week and upward. There are also many places where rooms and board can be obtained at reasonable rates. A list of approved available places for boarding or rooming can, at any time, be obtained from the President of the college. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations.

4 STUDENT LABOR.—The arrangement and amount of college work is such that any reasonably apt student should have at least two hours per day for recreation or outside work. The terms are so distributed through the year as to give the longest period of vacation possible in the Summer, thus enabling students to earn money. There is also a limited amount of paid labor about the institution which can be done by students and it is the policy of the regents to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while in college and doing school work, or be assured of an income in advance from paid labor.

5 SCHOLARSHIPS.—The following article from the law, defining powers and duties of the Regents of Education is self explanatory. "The Regents of Education shall fix all rates

of tuition and of other fees to be paid by students, but such rates must be the same in all the different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control; provided that the period for which appointment was made shall expire with the term of office of said senator or representative and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The Regents of Education make this article operative in the case of this institution.

6. PRIZES IN ORATORY.—Every regular student who is a candidate for a Bachelor's degree must take the work offered in oratory and argumentation, as described in Eh. 8. All work in essays, rhetoricals and oratory, is considered very important and standings obtained in this subject will enter fully into the final grade of the student. As an incentive to better work in oratory the President of the college offers two suitable prizes. A first and a second prize will be awarded such regular members of the Junior class as excel in the work of Eh. 8. The standings of the year in this course will be used to select six contestants who will compete for the prizes in an oratorical contest at the close of the year.

7. CO-EDUCATION.—Recognizing the value of industrial training as a feature of a practical institution for the masses, the college authorities have provided the various shops and laboratories in which the young men of the state may become familiar with the use of the different tools required in the principal mechanical industries. These special facilities are not confined to the young men, but special departments such as Domestic Science, Art and Music have been established so that the young lady students may have opportunities to fit themselves for a keener appreciation of the realities and enjoyments of life in the home, the school room, the store, the office

or the factory. The young woman will profit as much by the introduction of rational methods into her education as the young man, and while the shops, studios and laboratories may be used in some instances by the young man, and in others by the young woman, they are all open to both and in most cases students of both sexes will be seen working side by side. Instead of military drill the young lady students are required to take physical training.

8. MILITARY REQUIREMENTS.—The national law organizing and endowing these agricultural colleges requires that military science shall form a part of the instruction offered. The following regulations are in force in this institution concerning military duty:

(a) Male members of the Preparatory department are required to take the drill of Fall and Spring terms but may omit the drill recitations of the Winter term.

(b) All male students above the Preparatory department are required to take the work in Military offered for the first two years they are connected with the college or until they complete the required number of Military courses.

(c) No exemption from Military duty is allowed except upon excuse by the faculty for physical disability or other grave reasons. When such an excuse is granted some other work satisfactory to the faculty must be taken as an equivalent.

9. PHYSICAL CULTURE.—Unless excused for physical disability every female student is required to take Physical Culture twice a week for the first three continuous years of the time she is a student in the institution. Students taking Physical Culture will furnish special costumes for the same as indicated by the instructor.

10. ATHLETICS.—The above physical exercises only serve as a basis for many other forms of athletic exercises practiced, and which are recommended and encouraged by the officers of

the college. Under the auspices of the local organization, and a number of the State Athletic Associations, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the state "meet" once a year for athletic as well as other honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

11. ASSEMBLY.—No student is compelled to attend any religious exercise, but inasmuch as a congregation of all the students as often as once a week is desirable for social and economic reasons, once each week "Assembly" is held in the chapel, attendance upon which is required of every student and expected of every instructor. Usually an entertaining program is rendered consisting of an address by some competent person, or a short news review of the week by one of the students, and announcements for the following week, interspersed with music, thus making this exercise instructive and entertaining.

12. PUBLIC ENTERTAINMENTS.—In all cases of public entertainments the students taking part are required to submit their exercises first to the officer regularly in charge of such work, and to rehearse before the instructor of elocution at least ten days before the day of public performance, and as often as the instructor may designate.

13. STUDENT ORGANIZATIONS.—In the matter of student societies, the faculty allows the greatest freedom consistent with the general welfare. Those organizations which receive financial support from the student body and the general public are required to submit, at the close of the school year, a detailed report to the proper committee from the faculty.

14. LITERARY SOCIETIES.—There are three literary societies composed entirely of college students. These societies meet on every Saturday evening for literary exercises. A gen-

erous and fruitful rivalry for college honors exists among them, stimulating each to its best efforts. These societies are an important factor in the student's education and all are strongly advised to become members All preparatory students are expected to become members of the Franklin society. The work of the society is carried on under the supervision of the head of the Preparatory department and has a special function as preparation for college society work.

15. CHRISTIAN ASSOCIATIONS.—The young men's and young women's Christian Associations of the college are voluntary organizations. The purpose of the local organizations is to promote growth in grace and Christian fellowship among their members. They seek to surround the students with an earnest spiritual atmosphere; to minister to their intellectual, moral and social well being; and to exert a voluntary Christian influence in the college which shall be strong and helpful. As members of the Christian Inter-collegiate movement they receive all the benefits which accrue from such fellowship and from personal supervision of state and international college secretaries. Each association maintains daily prayer meetings and weekly devotional services.

16. ORATORICAL ASSOCIATION.—The purpose of this organization is to promote the art of public speaking among the students of the college. Each year it sends a representative, elected in a preliminary contest, to the Inter-collegiate contest of the state. In order that this contestant may fully represent the college, the faculty have imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree above that of the Freshman year.

17. GRADUATE CLUB.—The Graduate Club has been formed for the purpose of promoting good fellowship and broad scientific interest among the graduate students and resident graduates of the college. The club meets regularly on the last

Friday of each month during the school year. At these meetings papers are read, the object of which is to present in a comparatively untechnical form a brief outline of some topic of research, preferably touching recent advances in science.

18. OTHER ORGANIZATIONS.—Among other organizations may be mentioned the Athletic Association, which concerns itself with the athletic interests of the college; a debating club; and various other technical societies, each occupying its own sphere of influence.

19. STUDENT PUBLICATIONS.—The "Industrial Collegian" is a sixteen page monthly magazine published by the students of the college. The "Collegian" aims not only to be the organ of the student body but a mirror of student life at this institution. The editorial staff is composed of an Editor-in-Chief, a Business Manager, and one member selected by each regularly organized literary society in the college. The Editor-in-Chief and Business Manager are selected at the close of each Winter term by the students who are at the time of such election bona-fide subscribers of the "Collegian."

20. COLLEGE WORK.—The instructional work of the institution divides itself naturally into two main classes, studies which lie at the foundation of the Agricultural processes and those which bear more directly upon technological lines of work such as Mechanical, Steam and Electrical Engineering. The work of the college is morever offered in such a way as to be best adapted to individual characteristics and needs and at the same time to secure for all a well rounded and symmetrical development.

21. GENERAL CONDITIONS OF ADMISSION.—The candidate for admission to the college must be at least fourteen years old and of good moral character. Students will be admitted regularly to the collegiate department as follows:

First, those who have satisfactorily completed the work of the Preparatory and Sub-Freshman years as resident students.

Second, those who have properly completed this work in any other reputable institution and present satisfactory evidence to that effect.

Third, those who pass examinations in this work at the college.

Students applying for entrance to the Preparatory department must present evidence that they have completed the work of the public schools as far as the ninth grade; and no one is allowed to pursue the work of the Sub-Freshman year or higher work until grades in the Preparatory course have been obtained.

22. TIME OF ENTRANCE EXAMINATIONS.—The Monday and Tuesday immediately before the opening of each term will be devoted to examining students applying for admission, both to the college and the Preparatory department.

23. ADMISSION FROM OTHER INSTITUTIONS.—Students will be admitted to the college upon certificate from other reputable institutions, provided it shows:

First, that the student was honorably dismissed from that institution.

Second, that the student has completed creditably the work for which he requests credit. The college reserves the right, however, to cancel grades accepted from other schools, should the student be found deficient in the subjects for which credit has been given.

24. ENTRANCE CONDITIONS.—A student may be admitted to the college without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects with the regular classes.

25. ADVANCED STANDING.—Students entering upon advanced work must present grades from some reputable institution, showing that they have satisfactorily completed the

work for which they ask credit, or pass an examination on that work at the college.

26. CREDITS FROM ENTRANCE SUBJECTS.—If a student has passed in all his entrance subjects, he will be allowed to take examinations on any subject offered, if there are no prerequisites which shall bar him, and passing in such subjects shall receive due credit therefor.

27. SPECIAL STUDENTS.—Students of mature years, who have passed in the work of the Preparatory department, may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

28. METHOD OF REGISTRATION.—The student should obtain a classification card in the Registrar's office, upon which is written the names of the subjects to be pursued, according to the rules governing classification. The classification committee of the faculty will furnish all possible assistance in classifying students. New students must also fill out and file with the Registrar cards giving desirable information concerning themselves. Standings from the public schools or other educational institutions should also be filed with the Registrar at this time. Upon receipt of the fees for the term, the Secretary of the college stamps the classification card, which is then to be presented to the different instructors under whom work is to be taken for their signatures, and in order that they may also enroll the student in their classes. The card should then be returned to the Registrar. In no case should it be retained longer than three days after being issued. Students violating this requirement without sufficient excuse will be liable to the punishment of having their classification withdrawn.

29. COURSES DEFINED.—A full recitation course is a five hour per week lecture or text book study for one term, and is designated as a small (a) course. A full laboratory or practi-

cum course is a ten hour per week exercise for a whole term and is designated as a small (b) course. A course combining recitation and laboratory work is designated a small (a, b) course. No student will be permitted to take more than four nor less than two courses in any term.

30. GRADES.—All grades are reported to the Registrar in figures on a scale of 100 as perfect. Grades are reported to students in groups or classes as follows: Class "A" representing grades between 90 and 100. Class "B" from 80 to 90. Class "C" from 70 to 80 and class "D" for all grades below 70. Students having a term grade of "A" are not required to take final term examination with their class. Any student having a final term grade of "D" in a subject is conditioned.

Determination of Final Grade.—Ordinarily twice the recitation grade is added to the final examination grade and one-third of the sum is the "final grade." Large latitude is given the teacher, especially in the more advanced work, in the method of determining the student's "final grade."

31. CONDITIONED STUDENTS.—No student is allowed to register for advanced work who is conditioned in more than one course pursued in any one preceding term, neither will a student be permitted to register for advanced work at the beginning of any college year with more than one condition from previous work except when the student by permission changes major or minor and satisfies the faculty that he is unable to remove conditions.

32. ATTENDANCE AND DISMISSAL.—Students are expected to attend regularly all the exercises of the classes to which they are assigned from the date of their classification. When once classified they are required to be present from the beginning of each term thereafter, until regularly dismissed.

When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise it must be

applied for at the earliest possible date after return to work. Excuses will be granted only when the absence seems necessary.

All omitted work must be made up within two weeks after return to college duties, unless the health of the student requires a longer period. Applications for this extension should be made to the President when the student returns to work. This omitted work must be made up according to the direction of the instructor and at times designated by him or the tutor in charge of the same. Should a student find it necessary to sever his connection with the institution before his course is completed, he should report to the President his reasons and secure an honorable dismissal.

33. DEPORTMENT.—Every student is allowed the fullest freedom of conscience and is supposed to have well grounded habits of politeness, industry, punctuality and integrity, but in order that the faculty may deal justly with any exceptional cases the following regulations are in force. After being absent from any class duties, the student must present to the instructor a statement from the executive office showing that he has been reinstated in the class. Instructors are required to report to the executive office students who have been absent from three consecutive exercises of one subject. Upon entering the college and at the beginning of each term the student shall receive 100 deportment credits. Each unexcused absence shall be two discredits, and for any improper conduct noted and reported by any instructor the student shall be similarly punished in proportion to the offence. The number of credits a student has at the end of any term or at the time of severing his connection with the institution, determines his grade in deportment the same as in study. Should the number fall below eighty the student will be considered upon probation and if of age will be notified of the fact, otherwise his parents or guardian. Should his credits fall below seventy the student will be suspended for the remainder of the term.

34. DEGREES.—The college offers but two Baccalaureate degrees, Bachelor of Agriculture (B. Ag.,) and Bachelor of Science, (B. S.). For either degree the student must complete in a satisfactory manner the work of one of the schemes mentioned in 36. These include not less than forty-three courses above the Sub-Freshman year. The degree of Master of Science may be conferred upon students who already hold the Baccalaureate degree, and who complete an additional amount of work equal to fourteen courses to be chosen from two departments, in each of which credit for six collegiate courses has already been obtained, the advanced work to be done as prescribed by the faculty. Eight of these courses, consituting the "major," must be chosen from one department, and six courses, called the "minor," from the other. At least one year of this work must be done while in residence.

35. SPECIAL COURSES. The college also offers special courses in several important and practical lines of work. These are mentioned in part IV in connection with the departments principally concerned and are as follows:

1. A two years' course in Pharmacy, upon the completion of which the degree of Pharmacy Graduate is conferred. (See group "D," article 41.)
2. A one year's course in Business branches.
3. A one year's course in Amanuensis work.
4. A one year's course in Steam Engineering.
5. A one term's course in Agriculture.
6. A one term's course in Horticulture.
7. A one term's course in Dairy Science.
8. A special course in Music.
9. Special work in Art.

36. SCHEMES OF STUDY.—The work leading to a Bachelor's degree may be done according to one of four general schemes, called groups A, B, C, and D. Through these the work of the college is adapted not only to different classes of students, but to individual students themselves. The entrance require-

ments to each of these groups is the work of the Sub-Freshman year (See part IV.)

In each scheme, certain subjects, called required courses, must be taken by all students who follow that scheme; the remaining courses, called electives, can be selected by the students according to rules governing this choice.

Except in the case of group "D," which is designed for students of Pharmacy, nine elective courses are allowed, thus permitting the student to specialize during his last two years in college. In addition to these, the language work is largely elective, the student being allowed to choose between French, Latin or German, except in cases where his line of work makes one of them preferable to either of the others.

Before entering upon the duties of the Junior year, students should map out their work for the remaining two years, in a manner satisfactory to the professors under whom elective work is to be taken. Heads of the departments and members of the classifying committee will give all possible assistance towards helping the students in making a proper selection of subjects.

37. ELECTIVES.—The nine electives of groups A, B, and C must be chosen according to the following general rules:

No work ordinarily offered below the Sophomore year can be elected towards a degree. Where they deem it advisable, the faculty and heads of departments may impose special rules and restrictions governing the choice of electives. In no case shall the student be allowed to elect towards a degree more than three courses in industrial subjects such as cooking and shopwork, or exercises of a similar character, such as art and music; and these should be from the more advanced grades.

Five of the elective courses must be chosen along some one line of work, that in which the student wishes to specialize most, and shall constitute his "major." Three other courses must be chosen along some second line, and shall be called

his "minor." One general elective is allowed, which is intended to permit the student to bring up his prerequisites, or in some other way to contribute to his general scholarship, and should be selected with reference to these ends.

Majors may be chosen in the following departments: Agriculture, Horticulture, Botany, Chemistry, Zoology and Veterinary Medicine, Pharmacy, English, History and Economics, Mathematics, Physics, Mechanical and Electrical Engineering, and Domestic Science.

Minors may be chosen in the same departments as majors, and also in Foreign Languages, Art and Music.

General electives may be chosen from those courses which are offered as major and minor subjects.

In group "C," since sewing and cooking are required, not more than one elective can be chosen from industrial work of the Domestic Science department. For restrictions governing the choice of electives in Music, see description of the department in part IV.

38. GROUP "A"—The required courses of this group include those subjects which have a general application in the understanding of agricultural processes, thus affording the student the opportunity of laying the foundation for a broad scientific education. Those satisfactorily completing the work outlined for this group will receive the degree of Bachelor of Science.

Students who wish to obtain a more extended training in Agriculture and Horticulture than this scheme permits, may elect Agricultural and Horticultural subjects in place of a foreign language according to the scheme on page 68. This work is intended to meet the wants of those who return to the farm and upon completing it in a satisfactory manner the student will receive the degree of Bachelor of Agriculture.

(For list of required subjects of group "A" see schedules, pages 69 and 70.)

39. GROUP "B."—This group is intended for those students who wish to prepare themselves for pursuits which require only a general knowlege of mechanical and physical principles, as well as for those who wish to fit themselves for technical work in Mechanical and Electrical Engineering. It requires less literature, history and biology than group "A," and only one year of foreign language, French, is required. However, those who do not elect work in Mechanical or Eelectrical Engineering can continue study along these lines in the Junior and Senior years. Students electing majors and minors in Physics and Mechanics should pursue work according to this scheme. Those who wish to specialize in Mathematics can also follow to advantage the required work of this group. Those who take their elective work in Mechanical or Electrical Engineering as outlined in the schedules of article 41 will receive the degree of Bachelor of Science in Engineering studies. Those who choose their main elective work in other departments than these two, will receive the degree of Bachelor of Science.

(For list of required subjects of this group, see schedule, pages 71 and 72.)

40. GROUP "C."—This group is group "A" modified to meet the wants of the young ladies, who are all required to take Sewing and Domestic Dairying instead of Surveying and General Agriculture, and Household Economy in place of the third term of Botany.

(For list of required subjects of this group, see schedule, page 73.)

41. GROUP "D"—Students who satisfactorily complete the work of the first two years of this course will receive the degree of Pharmacy Graduate, (Ph. G.). After the completion of the work of the next two years, the degree of Bachelor of Science will be conferred. This work in Pharmacy is offered nowhese else in the state and has received the hearty commendation of the State Board of Pharmacy. The subjects of

this group offer excellent preparation for all the medical professions as well as for the teaching of science in high schools and colleges. Three elective courses are allowed and must be chosen from those subjects which are offered as major electives.

(For list of required subjects of this group, see schedule, page 74.)

41. SCHEDULES OF THE GROUPS.—On the next few pages the schedules of the work of the different groups are given. The subjects printed in ordinary type are the required courses while the electives are in *italics*. The notation immediately after the name of a subject indicates its nature and the number of times it occurs a week, "a" referring to the class work, and "b" to laboratory exercises. Whenever a choice is allowed between two subjects, as between Horticulture and English, the student must take that which bears more directly on his elective work. For requirements in military exercises and physical culture see page 55. The student must understand that these schemes are models only, in which the elective work is taken from the most important departments. Those wishing to elect other subjects than those indicated in the schemes must choose them according to the rules governing the choice of electives. (See 37.) The work is arranged so that one elective course is offered during each term of the Junior year and two each term of the Senior year. While this is suggested as being the model arrangement, students will be allowed to follow schemes of their own, providing all requirements are satisfied.

PRACTICAL AGRICULTURE.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	Geometry,.....a 5	Inorg. Chemistry,....a 3	Sys. Botany,.....a 3, b 2
	9:30	Inorg. Chemistry,...a 3	Eng. Literature, ...a 5	Trigonometry,.....a 3
	10:30	Am. Literature,.....a 5	Geometry,.....a 5	Org. Chemistry,..a 4, b 1
	11:30	Military,..... 3	Military,.....a 2	Military,..... 3
	2:00	Chem. Laboratory,..b 2	El. Botany,.....a 1, b 1	Gen. Agriculture,....a 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	Surveying, ... b 2
SOPH.	8:30	Breeds L. Stock, a 4, b 1	Gen. History,.....a 5	Adv. Physiology,....a 5
	9:30	El. Geology,..... ....a 5		
	10:30	Gen. Physics,...a 3, b 1	Soil Physics,.....a 3, b 2	Gen. History, ...a 5
	2:00		Theory of Hort.,.....a 3	Forestry,.....a 3
	3:00	Physiolog. Bot., a 2, b 3	Mycology,.....a 3, b 2	Stock Feeding,.....a 5
JUNIOR.	8:30	Pomology,.....a 5	Stock Breeding,.....a 5	Equip. Stock Farms, a 5
	9:30	Dom. Dairying,.....b 5	Adv. Geology,.....a 5	Am. Institutions,.....a 5
	10:30			
	11:30	Oratory, ...a 3	Adv. Zoology,.....a 3 Oratory,.....a 1	Psychology,.....a 3 Oratory,.....a 1
	2:00			
	3:00	Q. Chemistry,...a 1, b 4	Chem. of Foods, a 3, b 2	Ag. Chemistry, ..a 3, b 2
SENIOR.	8:30		Vet. Medicine, or.....a 5	Landscape Gard.,....a 2
	9:30	Astronomy, ...a 5	Hort. Investigation,..b 5	Bacteriology,....a 2, b 3
	10:30	Ev. Cult. Plants,....a 2 Soil Fertility,.....a 3	Economics, ...a 5	Ethics & Pedagogy, a 5
	11:30	Sociology,.....a 3		
	2:00		Ag. Experimentation b 5	
	3:00	Vet. Medicine,.....a 5		Entomology,.....a 2, b 3

SCIENTIFIC AGRICULTURE. GROUP A.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	Geometry,.....a 5	Inorg. Chemistry,....a 3	Sys. Botany,.....a 3, b 2
	9:30	Inorg. Chemistry,...a 3	Eng. Literature, ...a 5	Trigonometry,.....a 3
	10:30	Am. Literature,.....a 5	Geometry,.....a 5	Org. Chemistry,..a 4, b 1
	11:30	Military,..... 3	Military,.....a 2	Military,..... 3
	2:00	Chem. Laboratory,..b 2	El. Botany,.....a 1, b 1	Gen. Agriculture,....a 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	Surveying, ... b 2
SOPH.	8:30	French,.....a 5	Gen. History,.....a 5	Adv. Physiology,....a 5
	9:30	El. Geology,.....a 5	French, ...a 5	French, ...a 5
	10:30	Gen. Physics,...a 3, b 1	Soil Physics,.....a 3, b 2 or Gen. Physics, a 3, b 1	Gen. History, ...a 5
	2:00	Physiolog. Bot., a 2, b 3	Theory of Hort.,.....a 3 or English Classics,..a 3	Forestry,.....a 3 or English Classics,..a 3
	3:00	German or Latin,...a 5	German or Latin,....a 5	German or Latin,....a 5
JUNIOR.	8:30	Breeds L. Stock, a 4, b 1 or English History, a 5		
	9:30	German or Latin,...a 5	Adv. Geology,.....a 5	Am. Institutions,.....a 5
	10:30		German or Latin,....a 5	German or Latin,....a 5
	11:30	Oratory, ...a 3	Oratory,.....a 1 Adv. Zoology,.....a 3	Oratory,.....a 1 Psychology,.....a 3
	2:00	French,.....a 5	French, ...,a 5	French, ...a 5
	3:00	*Q. Chemistry,....a 1, b 4*	*Chem. of Foods,..a 3, b 2*	*Ag. Chemistry,....a 3, b 2*
SENIOR.	8:30		*Stock Breeding,..... a 5*	*Landscape Gardening a 2*
	9:30	Astronomy, ...a 5		*Bacteriology,.....a 2, b 3*
	10:30	*Ev. Cult. Plants,.....a 2* *Soil Fertility,.....a 3*	Economics, ...a 5	Ethics & Pedagogy, a 5
	11:30	Sociology,.....a 3		
	3:00	*Vet. Medicine,.....a 5*	*Ag Experimentation, b 5*	*Entomology,.....a 2, b 3*

SCIENTIFIC HORTICULTURE. GROUP A.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	Geometry,.....a 5	Inorg. Chemistry,....a 3	Sys. Botany,.....a 3, b 2
	9:30	Inorg. Chemistry,...a 3	Eng. Literature, ...a 5	Trigonometry,.....a 3
	10:30	Am. Literature,.....a 5	Geometry,.....a 5	Org. Chemistry,..a 4, b 1
	11:30	Military,..... 3	Military,.....a 2	Military,..... 3
	2:00	Chem. Laboratory,..b 2	El. Botany,.....a 1, b 1	Gen. Agriculture,....a 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	Surveying, ... b 2
SOPH.	8:30	French,.....a 5	Gen. History,.....a 5	Adv. Physiology,....a 5
	9:30	El. Geology,.....a 5	French, ...a 5	French, ...a 5
	10:30	Gen. Physics,...a 3, b 1	Soil Physics,.....a 3, b 2 or Gen. Physics, a 3, b 1	Gen. History, ...a 5
	2:00	Physiolog. Bot., a 2, b 3	Theory of Hort.,.....a 3 or English Classics,..a 3	Forestry,.....a 3 or English Classics,..a 3
	3:00	German or Latin,...a 5	German or Latin,....a 5	German or Latin,....a 5
JUNIOR.	8:30	Pomology,.....a 5 or English History, a 5		
	9:30	German or Latin,...a 5	Adv. Geology,.....a 5	Am. Institutions,.....a 5
	10:30		German or Latin,....a 5	German or Latin,....a 5
	11:30	Oratory, ...a 3	Oratory,.....a 1 Adv. Zoology,.....a 3	Oratory,.....a 1 Psychology,.....a 3
	2:00	French,.....a 5	French, ...a 5	French, ...a 5
	3:00	*Q. Chemistry,. ..a 1, b 4*	*Mycology,.....a 2, b 3*	*Ag. Chemistry,....a 3, b 2*
SENIOR.	8:30		*Stock Breeding,..... a 5*	*Landscape Gardening a 2*
	9:30	Astronomy, ...a 5	*Hort. Investigation,..b 5*	*Bacteriology,.....a 2, b 3*
	10:30	*Ev. Cult. Plants,.....a 2* *Soil Fertility,.....a 3*	Economics, ...a 5	Ethics & Pedagogy, a 5
	11:30	Sociology,.....a 3		
	3:00	*Vet. Medicine,.....a 5*		*Entomology,.....a 2, b 3*

MECHANICAL ENGINEERING. GROUP B.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	Geometry,.....a 5	Inorg. Chemistry,....a 3	Sys. Botany,.....a 3, b 2
	9:30	Inorg. Chemistry,...a 3	Eng. Literature, ...a 5	Trigonometry,.....a 3
	10:30	Am. Literature,.....a 5	Geometry,.....a 5	Mech. Drawing,.....b 3
	11:30	Military, ... 3	Military,.....a 2	Military,..... 3
	2:00	Chem. Laboratory,..b 2	Mech. Drawing,.....b 3	Mech. Drawing,.....b 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	Surveying,. .....b 2
SOPH.	8:30	French, ...a 5	An. Geometry,.....a 5	Calculus,.....a 5
	9:30	El. Geology, ...a 5	French, ...a 5	French,..... .....a 5
	10:30	Phys., a 3, b 1, Alg. a 2	Gen. Physics,....a 3, b 1	El. Mechanics,.....a 5
	2:00	Shopwork, ...b 3	Shopwork, ...b 5	Shopwork,.....b 3
	3:00			
JUNIOR.	8:30	Adv. Physics,...a 3, b 2	Gen. History,.....a 5	Steam Engine,.....a 5
	9:30	*Els. of Mechanism,..a 5*	Adv. Physics,....a 3, b 2	*Adv. Physics,.....a 3, b 2*
	10:30	Calculus,.....a 3		Gen. History,.....a 5
	11:30	Oratory,..... .....a 3	Oratory, a 1, Adv. Zo. a 3	Oratory, a 1, Psych., a 3
	2:00	Shopwork,.....b 3		
	3:00		*An. Mechanics,,.....a 5*	
SENIOR.	8:30	*Steam Boilers,.. ....a 5*	Str. in Frame Struct., a 6	
	9:30	Astronomy,.....a 5	*Dynamo El. Mach., a 3 b 2*	*Dyn. El. Mach.,..a 3, b 2*
	10:30		Economics, ...a 3	Ethics & Pedagogy, a 5
	11:30	Sociology,,.....a 3		
	2:00	*Kinematics,.....b 5*	*Eng. Design,.....b 5*	*Eng. Design, ...b 5*
	3-00			

ELECTRICAL ENGINEERING. GROUP B.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	Geometry,.....a 5	Inorg. Chemistry,....a 3	Sys. Botany,.....a 3, b 2
	9:30	Inorg. Chemistry,...a 3	Eng. Literature,.....a 5	Trigonometry,.....a 3
	10:30	Am. Literature,.....a 5	Geometry,.....a 5	Mech. Drawing,.....b 3
	11:30	Military,..... 3	Military,.....a 2	Military,..... 3
	2:00	Chem. Laboratory,..b 2	Mech. Drawing,.....b 3	Mech. Drawing,.....b 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	Surveying,.....b 2
SOPH.	8:30	French, ...a 5	An. Geometry,.....a 5	Calculus,.....a 5
	9:30	El. Geology, ...a 5	French, ...a 5	French,.....a 5
	10:30	Phys., a 3, b 1, Alg. a 2	Gen. Physics, a 3,....b 1	El. Mechanics,.....a 5
	2:00	Shopwork, ...b 3	Shopwork, ...b 5	Shopwork,..... .....b 3
	3:00			
JUNIOR.	8:30	Adv. Physics,...a 3, b 2	Gen. History,.....a 5	Steam Engine,.....a 5
	9:30	*Els. of Mechanism,..a 5*	Dynamo El. Mach. a 3 b 2	*Dynamo El. Mach., a 3 b 2*
	10:30			Gen. History,.....a 5
	11:30	Oratory,..... .....a 3	Oratory, a 1, Adv. Zo. a 3	Psych., a 3, Oratory, a 1
	2:00	Elec. and Mag., a 3, b 2	*Shopwork or Drawing, b 5*	
	3:00			
SENIOR.	8:30	*Steam Boilers,.. ....a 5*	*Electric Light and Power Distribution, a 3, b 2*	*Des. Power Sta., a 3, b 2*
	9:30	Astronomy,.....a 5		
	10:30	*Alt. Currents,....a 3, b 2*	Economics, ...a 3	Ethics & Pedagogy, a 5
	11:30	Sociology,,.....a 3	*Shopwork or Draw'g, b 2*	
	2:00	*Shopwork or Draw'g, b 2*		*Shopwork or*
	3-00		*An. Mechanics,,.....a 5*	*Drawing,.....b 3*

DOMESTIC SCIENCE. GROUP C.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	Geometry,.....a 5	Inorg. Chemistry,....a 3	Sys. Botany,.....a 3, b 2
	9:30	Inorg. Chemistry,...a 3	Eng. Literature,.....a 5	Trigonometry,.....a 3
	10:30	Am. Literature,.....a 5	Geometry,,.....a 5	Org. Chemistry,..a 4, b 1
	11:30	Physical Culture,.... 3	Physical Culture,. ... 3	Physical Culture.,.... 3
	2:00	Chem. Laboratory,..b 2	El. Botany,.....a 1, b 1	Sewing,.....b 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	Dom. Dairying,.....b 2
SOPH.	8:30	French,.....a 5	Gen. History,.....a 5	Adv. Physiology,....a 5
	9 :30	El. Geology,.....a 5	French,.....a 5	French.....a 5
	10:30	Gen. Physics,...a 3, b 1	Gen. Physics,....a 3, b 1	Gen. History,.....a 5
	11:30	Physical Culture,.... 3	Physical Culture,..... 3	Physical Culture,..... 3
	2:00	Household Econom., a 5	Eng. Classics,.....a 3	Eng. Classics,.....a 3
	3:00	German or Latin,...a 5	German or Latin,....a 5	German or Latin,....a 5
JUNIOR.	8:30	Eng. History,.....a 5		
	9:30	German or Latin,...a 5	Adv. Geology,.....a 5	Am. Institutions,.....a 5
	10:30		German or Latin,....a 5	German or Latin,....a 5
	11:30	Oratory, ...a 3	Adv. Zo., a 3, Oratory a 1	Psych., a 3, Oratory, a 1
	2:00	French,.....a 5	French,.....a 5	French,.....a 5
	3:00	*Q. Chemistry,....a 1, b 4*	*Chem. of Foods,..a 3, b 2*	*Entomology,.....a 3, b 2*
SENIOR.	8:30	*Household Sanit'n,..a 5*	*Invalid Cookery,.....b 5*	
	9:30	Astronomy,.....a 5		*Bacteriology,.....a 2, b 3*
	10:30		Economics,.....a 5	Ethics & Pedagogy,..a 5
	11:30	Sociology,.....a 3		
	2:00	*Elective,.....5*	*Elective,..... .....5*	*Elective,.....5*

PHARMACY. GROUP D.

		FALL.	WINTER.	SPRING.
FRESHMAN.	8:30	An. Methods,...a 3, b 2	Inorg. Chemistry,....a 3	Adv. Physiology, ...a 5
	9:30	Inorg. Chemistry,...a 3	An. Methods,....a 3, b 2	Pharmacognosy, a 2, b 3
	10:30	Pharm. Latin,.....a 5	Pharmacognosy, a 3, b 2	Org. Chemistry,..a 4, b 1
	11:30	Military,..... 3	Military,.....a 2	Military,..... 3
	2:00	Chem. Laboratory,..b 2	El. Botany,.....a 1, b 1	Pharmacog. Lab.,.....b 3
	3:00	El. Botany,.....a 1, b 2	Chem. Laboratory,...b 2	
SOPH.	8:30	Pharmacy,.....a 5		Mat. Medica,.....a 5
	9 :30	Mat. Medica,.....a 5	Pharmacy,.....a 5	Pharmacy,.....a 5
	10:30	Am. Literature,.....a 5	Mat. Medica, ...a 5	Pharmacy,.....b 5
	11:30			
	2:00		Pharmacy,.....b 5	Drug Assaying,.....b 5
	3:00	Q. Chemistry,...a 1, b 4		
JUNIOR.	8:30	Geometry,.....a 5	Gen. History,.....a 5	Elective,..... a 5
	9:30	El. Geology,.....a 5	Eng. Literature,.....a 5	Trigonometry,.....a 3
	10:30	Gen. Physics,...a 3, b 1	Geometry,,.....a 5	Gen. History,.....a 5
	11:30	Oratory, ...a 3	Oratory, ...a 1	Psychology,.....a 3 Oratory,.....a 1
	2:00			Surveying,.....b 2
SENIOR.	8:30	Elective,.....a 5	Elective,.....a 5	
	9:30	Astronomy,.....a 5	Adv. Geology,.....a 5	Am. Institutions,.....a 5
	10:30		Economics, ...a 5	Ethics & Pedagogy,..a 5
	11:30	Sociology,.....a 3		
	2:00			
	3:00	German or Latin,...a 5	German or Latin,....a 5	German or Latin,....a 5

PART FOUR.

DESCRIPTION OF WORK.

EXPLANATORY NOTE.—In the case of the required work, it is desirable to conform as nearly as possible to the schedules of pages 68-75. While the elective work has been arranged as nearly as possible to suit existing conditions, in the case of some of the higher courses other hours more convenient to both teacher and students may be arranged for. Other hours than those designated may also be open to laboratory work, since several small classes may be accommodated in most of the laboratories at the same time. While no regular work is assigned to Saturdays, the laboratories will be open then as much as possible. As in Part III, the letters "a" and "b" are used to designate recitation work and laboratory work respectively. For information concerning the required and elective courses, see "D," Part III.

THE AGRICULTURAL EXPERIMENT STATION.

Ex.

PROFESSOR SHEPARD, DIRECTOR.

This department of the college is well provided with land, laboratories, appliances and funds. About sixty acres of the college farm is set aside for special experiments in crops and soil moisture determinations. The Horticultural experiments cover another sixty acres with trees, shrubs and other experiments. A three story brick building is devoted almost entirely to the laboratory work of the station. The station has a corps of trained and experienced scientists constantly at work to discover new scientific truth and find its application to the

industrial processes. (For station staff for 1900-1901, see page 12.) More than sixty-six bulletins giving results of of experiments have been issued and distributed among the farmers of the state. Any farmer of the state can have the bulletins of this institution free upon application to the Director. All letters of inquiry about experimental work or for bulletins, should be addressed to "Director of Experiment Station," Brookings, S. D.

DEPARTMENT OF AGRICULTURE.

Ag.

PROFESSOR CHILCOTT; MR. WHEATON.

Students may elect a major in Agriculture or they may follow either of the courses offered in Agriculture as given on pages 68-69. The work is fully illustrated and made practical by operations of a large stock farm used to maintain specimen animals and illustrate the best methods of managing stock farms and feeding live stock.

Eleven breeds of cattle, sheep and swine numbering in all about one hundred twenty-five animals are kept to illustrate types of animals suited to special purposes. These types illustrate dairy and beef breeds of cattle, mutton breeds of sheep, and various types of swine suited to special conditions. They afford the student an opportunity to observe the practical methods of feeding and management. The policy in equipping the farm has been to procure as great a diversity of implements and appliances as is consistent with economical management, so as to give the student opportunity to observe points of merit in each machine.

The various laboratories, literature and experiments connected with the Agricultural Experiment Station also afford excellent opportunity to study soil treatment, plant culture

and farm management. The aim in this as in all other departments is to give the student practical as well as theoretical information and experience. The following work is offered:

1 S.—General Agriculture, a 3. 2:00-3:00. Prof. Chilcott. Required in group "A."

a, The agricultural conditions and possibilities of the United States, present and prospective.
Lectures, note books and reference readings.

2 F.—Breeds of Live Stock, a 4, b 1. 8:30-9:30. Prof. Chilcott. Required of students in Practical Agriculture.

a, Characteristics of various breeds of live stock, their adaptability to special locations for special purposes. Methods of breeding and selection pursued in the development of each breed. All breeds are studied in their relation to types, and much importance is placed on actual test as a guarantee of merit. Extension and economic development of different branches of live stock industry.
Curtis's Cattle, Horses, Sheep and Swine.
Numerous books of reference.

3 F. or W.—Domestic Dairying, b 5. 9:30-11:30. Mr. Wheaton. Required of students in Practical Agriculture.

b, Care and Manipulation of milk, manufacture of butter, approved dairy methods in care of utensils, proper regulations of herds, stable methods, fancy butter making discussed and practiced.
Wing's Milk and its Products.
Gunter's American Dairying.

4 S.—Domestic Dairying, b 2. 2:00-4:00. Mr. Wheaton. Required in group C.

b, In this course an effort is made to give practical and valualbe instruction on modern methods of home butter making; care of milk and development and care of dairy herd. Students are allowed the use of hand separators in the creamery and are given the fullest opportunity to understand

methods not only of home butter making, but those employed in creameries.

5 S.—Stock Feeding, a 5. 3:00-4:00. Prof. Chilcott.

Pre. 3. Required of all students in Practical Agriculture.

a, Laws of nutrition and waste of the body under labor or at rest, the income and expenditure of energy, composition of the body and of food consumed to produce the most economical result. Scientific feeding and balanced rations for large production of dairy or meat products, finishing animals for market and care and management of live stock

W. A. Henry's Feeds and Feeding.

Numerous books of reference.

6 W.—Stock Breeding, a 5. 8:30-9:30. Prof. Chilcott.

Pre. 3 and Zo. 1. Required of all students in Agriculture.

a, Lectures and references to original research on the laws of reproduction as influenced by variation, selection and heredity. The effects of environment, use and disuse, crossing, and in-breeding in relation to their effects on variation and heredity, methods of selection to perfect types and secure prepotency.

Miles' Stock Breeding and other books of reference.

7 S.—Equipment of Stock Farms, a 5. 8:30-9:30. Prof. Chilcott. Required of all students in Agriculture.

a, Adaptability of individuals and localities to different branches of stock production, depending on natural fertility, crop production, water supply and markets, management of dairy farms, the maintenance of sheep and cattle ranches, stock to consume residues and growing and furnishing of animals for market, construction and arrangement of barns and other buildings from economic and sanitary standpoints.

8 W.—Soil Physics, { a 3. 10:30-11:30. / b 2. 9:30-11:30. } Prof. Chilcott.

Pre. Gl. 1. Required of all students in Agriculture.

a, Physical properties of soils, supply of food to the grow-

ing plant, soil moisture, soil temperature, tillage, nitrification and fertilizers.

King's Soils.

b, Microscopic examination of soils, mechanical analysis by "beaker method," determination of organic matter, capillary effects upon soil of the application of direct and indirect manures.

9 F.—Soil Fertility, a 3. 10:30-11:30. Prof. Chilcott.

Pre. 8. Required of all students in Agriculture.

a, A study of manures and manuring. Nitrification, leguminous crops for green manuring. Conservation of fertility by rotation of crops. Economic sources of the elements of fertility.

Aikman's Manures and Manuring.

10 W.—Agricultural Experimentation, b 5. 2:00-4:00. Prof. Chilcott.

Pre. 1, 2, 3, 4 and 5. Required of all students in Agriculture.

b, A general study of experimental work as pursued by the experiment stations of this country, study of the bulletins and reports of the various stations and a comparison of their results and methods.

Experiment Station Record. U. S. Department of Agriculture and Experiment Station publications.

SPECIAL COURSES IN AGRICULTURE.

(From Jan. 2 to Mar. 27, 1901.)

This is an arrangement of certain short courses in the Winter Term designed to be taken by farmers' sons who for any reason are unable to take more extended work. To such students this work will be as valuable and should become as popular as the special dairy work. The work consists of the following courses, upon completion of which students will be given a certificate.

Dy. 1. General Agriculture and Dairy Cows, a 5, 8:30

Dy. 2. Dairy Lectures, a 5. 9:30

Dy. 3. Dairy Arithmetic, a 3.	10:30
Dy. 4. Lectures in Botany, Entomology, Zoology, a 3.	11:30
Dy. 7. Dairy Practice, b 3	2:00
Ag. S. Elective Laboratory, b 2.	2:00

SPECIAL WORK IN DAIRY SCIENCE.

(From Jan. 2 to Mar. 27, 1901.)

In response to a popular demand for instruction in Dairy Science, resulting from the rapid growth and importance of the industry in the state, the college has for some years maintained facilities for this instruction. The work combines in a proper degree theoretical and practical methods. A new creamery was constructed on the college campus during the summer of 1899 This has been thoroughly furnished and fitted with the most modern appliances for making butter and cheese and for testing and sterilizing milk. A satisfactory completion of the work offered entitles the student to a certificate of competency as helper and after four months in this capacity, on the recommendation of his creamery manager, he may receive an advanced certificate as competent to operate a creamery.

The following work is offered, viz:

Dy. 1.	Gen. Agriculture and Cr. Dairy Cows, a 5.	8:30
Dy. 2.	Dairy Lectures, a 5.	9:30
Dy. 3.	Dairy Arithmetic, a 3.	10:30
Dy. 5.	Dairy Engineering, a 2.	10:30
Dy. 4.	Lectures in Botany, Ent. and Zoology, a 3.	11:30
Pr. 3.	Book Keeping, a 3.	2:00
Dy. 7.	Creamery Practice, (daily)	3:00

HOME READING COURSE.

The college aims to reach and interest farmers in their homes. It offers instruction by correspondence to those who will read such books as are recommended and send to the college written answers to questions sent out. Five distinct

courses are offered in this way and it is certainly a rare opportunity for self improvement. Those who desire a circular giving these courses and the method of procedure should write the President of the college for same.

FARMERS' INSTITUTES.

The college carries its instruction to the homes of farmers by a system of institutes which it conducts during the winter months. These are arranged where communities express a desire for such a meeting and will do sufficient advertising to insure a fair attendance. The institutes are interesting and instructive, dealing with such problems as are of local importance, and have a scientific bearing. Communications about institutes should be addressed to "Conductor of Farmers' Institutes," Brookings, S. D.

DEPARTMENT OF HORTICULTURE AND FORESTRY.

Ho.

PROFESSOR HANSEN; MR. THORNBER.

In the regular college work these subjects are taught as an applied science as well as an art, full use being made of the student's attainments in the various sciences underlying the practice of Horticulture. The variation of cultivated plants, and the principles and methods of their development under the hand of man, are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lessons taught in the class room. Ample facilities for practical illustration are afforded by the eighty acres of experiment station horticultural grounds and college campus, includiug the orchards, forestry plantations, arboretum, nursery, vegetable

gardens, small fruit plantations, flower borders and ornamental grounds. The horticultural building contains class room, laboratory, conservatory and forcing house; grafting and potting rooms, storage cellars, a garden herbarium and museum.

Students desiring to make Horticulture their major subject should elect courses 2-8 inclusive. One full course in Entomology may be substituted for either 7 or 8. Those taking a minor should elect courses 2-6 inclusive. Those wishing to take one general elective should take courses 5 and 6, 3 and 4, or 4 and 5.

The commercial nursery course is intended as a short winter course for those desiring to engage in the business of growing trees and plants for sale, especially trees adapted to prairie conditions. Special stress is laid upon practical work in the grafting room. No examination is required for entrance to this short course.

The following work is offered:

1 S.—Elements of Horticulture { a 1. 3:00-4:00 / b 2. 2:00-4:00 } Prof. Hansen.
Required of all students.

a, Propagation and management of fruit and ornamental trees and plants with special reference to prairie conditions; cultivation of vegetables, greenhouse management; floriculture and home gardening. A view is taken of the entire field of Horticulture and its various divisions as a life work.

b, Special attention is given by the young men to work in grafting and to general field and greenhouse work, and by the young women to exercises in floriculture and home gardening.

Lectures with text-books references.

2 F.—Pomology and Olericulture, a 5. 8:30-9:30. Prof. Hansen.
Pre. 1. Required of students in Practical Agriculture.

a, The history, management and propagation of fruits and

vegetables. Exercises in the technical description of fruits.
Lectures, with text-book references.

3 W.—Theory of Horticulture, a 3. 2:00-3:00. Prof. Hansen.
Required of all students of Agriculture.

a, Lectures on the theory of gardening operations The relationship and physiology of plants from an horticultural standpoint.

4 F.—Evolution of Cultivated Plants. a 2. 10:30-11:30. Prof. Hansen.
Required of all students of Agriculture.

a, The variation of plants under the hand of man. The modification und amelioration of plants by cultivation, soil, climate, selection and hybridization.
Lectures, Bailey's Plant Breeding and Survival of the Unlike.

5 S.--Forestry, a 3. 2:00-3:00. Prof. Hansen.
Required of all students of Agriculture.

a, Principles of forestry, the influence of forests on climate, timber planting on the prairies, European forestry methods as affected by prairie conditions, shelter belts, the propagation, cultivation, characteristics and uses of forest trees.
Lectures, Green's Forestry in Minnesota.

6 S.—Landscape Gardening, a 2, 8:30-9:30. Prof. Hansen.
Required of all students of Agriculture

a, Lectures on the beautiful in nature, gardening as one of the fine arts, historical development of the ancient or geometric, and the modern or natural styles, best ornamental trees, shrubs and plants, hedges, lawn-making, walks and drives.

7 F., W or S.--Horticultural Investigation, b 5. 2:00-4:00. Prof. Hansen.
Pre. 1-6.

b, Investigation in some special line.

8 W.—German Horticultural Literature, a 5. 9:30-10:30. Prof. Hansen.
Pre. 1-6 and the first four terms of German.
a, The reading of technical German works on Horticulture.

SHORT COURSE IN HORTICULTURE.
(From Jan. 2 to March 27, 1901.)

Special Commercial Nursery Course. Lectures and practical work in commercial propagation and nursery management of fruit trees, small fruits, forest trees, ornamental trees, shrubs and plants, grafting, budding, pruning, cutting scions, packing grafts, making cuttings and stratifying seeds. All of every day.

Lectures; Budd's Handbook of Horticulture, Bailey's Nursery Book, Goff's Principles of Plant Culture, Green's Amateur Fruit Growing and Forestry in Minnesota.

DEPARTMENT OF BOTANY,
Bt.

PROFESSOR SAUNDERS; MR. THORNBER.

The work in Botany is arranged to give the student a thorough knowlege of plant life. The department occupies the second floor of the South Building, having an office, lecture room, herbarium and laboratory. It is provided with all the apparatus necessary for biological work including microtome, microscopes and physiological apparatus.

1 F.—Elementary Botany, { a 1. 2:00-3:00. } Prof. Saunders. { b 2. 2:00-4:00. } Mr. Thornber.
Required of all students.
a, A general introduction to Botany, the structure and function of protoplasm, a brief study of some of the principles

of plant economy and the life history of some important groups of microscopic plants, introduction to the structure of the flowering plants.

b, Demonstrations of (a.)

Atkinson's Elementary Botany with lectures.

2 W.—Elementary Botany { a 1. 2:00-3:00 / b 1. 2:00-4:00 } Prof. Saunders. Mr. Thornber.

Pre. 1. Required in groups A, C and D. Continuation of 1.

3 S.—Systematic Botany, { a 3. 8:30- 9:30. / b 2. 8:30-10:30. } Prof. Saunders. Mr. Thornber.

Pre. 1 and 2. Required in groups A, B and C.

a, The relationship of ferns and flowering plants.

b, The collecting, analyzing, naming and mounting of an herbarium of one hundred plants.

Gray's Lessons and Manual of Botany.

4 F.—Physiological Botany, { a 2. 2:00-3:00. / b 3. 2:00-4:00. } Prof. Saunders.

Pre. 1, 2 and 3, Ph. 1 and 2, Ch. 1 and 2. Required in group A.

a. The manufacture of the various food substances from inorganic matter, metabolism, absorption of gases, irritability and growth.

b, Demonstrations of (a.)

McDougal's Plant Physiology. Lectures and references.

5 W.—Pharmacognosy, { a 3. 10:30-11:30. / b 2. 10:30-12:30. } Prof. Saunders.

Pre. 1 and 2. Required in group D.

a, Families of medicinal plants, the histology of the important drugs, study of the glands, reservoirs or receptacles of the essential parts of the drugs.

b, Demonstrations of (a.)

Sayer's Organic Materia Medica and Pharmacognosy.

6 S.—Pharmacognosy, { a 2. 9:30-10:30. / b 3. 2:00- 4:00. } Prof. Saunders.

Pre. 5. Required in group D.

a, Continuation of 5.

b, Demonstrations of (a.)

Sayer's Organic Materia Medica and Pharmacognosy.

7 F.—Embr'y & Phytopal'ogy, { a 2. 3:00-4:00. / b 3 2:00-4:00. } Prof. Saunders. Pre. 1, 2, 3 and 4.

a, A study of the life history of some plant, lectures in fossil botany.

b, Demonstrations of (a.)

8 W.—Mycology, { a 3. 3:00-4:00. / b 2. 2:00-4:00. } Prof. Saunders.

Pre. 1, 2, 3 and 4.

a, Structure and reproduction of the more important fungi; especial attention will be given to those that are destructive to economic plants.

b, Demonstrations of (a.)

9 S.—Entomology, { a 2. 3:00-4:00. / b 3. 2:00-4:00. } Prof. Saunders.

Pre. 1, 2 and 3, Zo. 1 and 2 Required of students in PracticalA griculture.

a, Study of the life history of several type insects, means employed in combatting insects destructive to economic plants.

b, Demonstrations of (a.)

Comstock's Entomology.

10 F.—Ferns & Flow'r'ng Plants, { a 2. 10:30-11:30. / b 3. 2:00- 4:00. } Prof. Saunders. Pre. 1, 2 and 3.

a, History and Physiology. A study of the minute tissues of the higher plants.

b, The solving of physiological problems by experimentation. Bessey's Botany and Lectures.

11 W.—Cryptogamic Botany, { a 2. 8:30-9:30. / b 3. 2:00.4:00, } Prof. Saunders.
Pre. 1, 2 and 3.

a, Structure and life history of type specimens of the lower plants from the bacteria to the ferns, a study of the fungi destructive to farm and garden crops.

b, Laboratory work covering topics in (a.)
Bessey's Essentials of Botany.

12 S.—Sys. Bot. & Ecology, { a 3. 2:00-3:00. / b 2. 2:00-4:00. } Prof. Saunders.
Pre. 1, 2, 3 and 4.

a, The principal families of flowering plants, their distribution and relationship, lectures on relation of the plant to its environment.

b, Demonstrations of (a.)

Special W.—Prac. Bot. and Entom'y, a 2. 11:30-12:30. Prof. Saunders.

DEPARTMENT OF CHEMISTRY.

Ch.

PROFESSOR SHEPARD; MR. KNOX.

The department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks, and the like, are furnished. The main laboratory accommodates from eighty to one hundred students all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This

laboratory accommodates twenty students working together. It is supplied with all needed quantitative apparatus such as precipitation flasks, dessicators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Sartorus quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this college and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

The following courses are offered:

1 F.—Des. Inorganic Chem., { a 3. 9:30-10:30. } Prof. Shepard. { b 2. 2:00- 4:00. } Mr. Knox.

Pre. Ph. 2 and Ms. 2. Required of all students.

a, History of chemistry, elements, compounds, symbols. valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies.

b, Detection of the non-metallic elements and their compounds.

Shepard's Elements of Chemistry.

2 W.—Qual. Inorganic Chem., { a 3. 8:30-9:30 } Prof. Shepard. { b 2. 2:00-4:00. } Mr. Knox.

Pre. 1. Required of all students.

a, The metals and their compounds. Groups of metals, separation of the metals and uses of their compounds.

b, Detection of principal metals and the working of a list of unknowns.

Shepard's Elements of Chemistry.

3 S.—El. Organic Chem., { a 4. 10:30-11:30. } Prof. Shepard. { b 1. 10:30-12:30. } Mr. Knox.

Pre. 2. Required in groups A, C and D.

a, The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds.

b, The detection of principal organic compounds.

Shepard's Elementary Organic Chemistry.

4 F.—Quantitative Chem., { a 1. 3:00-4:00. } Prof. Shepard. { b 4. 2:00-4:00 } Mr. Knox.

Pre. 2. Required in group D.

a, The apparatus and its uses. Explanation of methods of quantitative determinations and reports of students analyses.

b, The quantitative analysis of typical chemical compounds, e. g. calcite, magnesium sulphate and coal. Students will use both the volumetric and gravimetric methods.

Fresenius' Quantitative Chemistry.

5 W.—Chemistry of Foods, { a 3. 3:00-4:00. } Prof. Shepard. { b 2. 2:00-4:00. }

Pre. 1, 2, 3 and 4. Required of all students in Agriculture.

a, Study and detection of adulterants in baking powders, milk, butter, cereals, spices, fats and other foods.

b, Determinations of (a.)

6 S.—Agricultural Chem., { a 3. 3:00-4:00. } Prof. Shepard. { b 2. 2:00-4:00. }

Pre. 1, 2, 3, 4 and 5. Required of all students in Agriculture.

a, Chemistry of fertilizers, feed stuffs, fruits, vegtables, grasses, dairy products, alcholic liquors and soils.

b, Analyses of fertilizers, grasses, dairy products, feed stuffs and soils.

6 F.—Organic Analysis, { a 2. 2:00-3:00. } Prof. Shepard. { b 3. 2:00-4:00. }

Pre. 3 and 4.

a, Physical properties of organic compounds, the general relations existing between classes of compounds and the transformation from one class into another.

b, Demonstrations of (a.)

8 W.—Physiological Chem., { a 1. 3:00-4:00. / b 4. 2:00-4:00. } Prof. Shepard.
Pre. 3, 4 and Zo. 1, 2 and 3.

a, Composition of blood, muscle, urine, albumen, fat, bone, gall, liver, and products of the glands.

b, Quantitative determinations of (a.)

9 S.—Industrial Chemistry, b 5. 8:30-10:30. Prof. Shepard.
Pre. 3 and 4.

b, Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples including water pollution, purification, artificial illumination, petroleum testing, fermentation, air contamination, disinfection, ventilation, bleaches, and dyeing,

DEPARTMENT OF GEOLOGY AND AGRONOMY.

G1.

PROFESSOR CHILCOTT; MR. HOLM.

In offering the work of this department two objects are sought. First, to give all the candidates for B. S. degree a thorough understanding of the foundation principles of the subject. Second, to afford an opportunity for students desiring to become specialists along any line of agriculture, to make a thorough study of the soil, its relations to plant growth and crop production. The basis of all work is Physical Geography which is required as a preparatory study. Especial effort is made in courses 1 and 3 to train the student in habits of close observation of the various common natural phenomena and to acquaint them with the geological history, climatic conditions and natural resources of the state as well as to give a general knowledge of Geology. Advantage is taken of the

collections of geological specimens in the study of the earth's formation, as well as of the various charts, globes and other instruments belonging to this and other departments, available for instructional purposes.

Students upon completing course 1 may elect the work in soil physics and kindred subjects, this work is available to those making agriculture their major. The various laboratories, literature and work of the Experiment Station is taken advantage of as illustrative of modern methods in conducting work along these lines. In this as in other departments ample latitude is given the student to specialize in the work best suited to his tastes, training and needs.

The following courses are offered:

1 F.—Elementary Geology, a 5. 9:30-10:30. Prof. Chilcott.
Pre. Ch. 1 and 2. Zo. 1. Required of all students.

a, Introduction to structural, dynamic and strateographic Geology. Lectures illustrated by the stereopticon.
Scot's Introduction.

2 W.—Soil Physics, { a 3. 10:30-11:30. / b 2. 9:30-11:30. } Prof. Chilcott.
Pre. 1. Required of all students in Agriculture.

a, Physical properties of soils, supply of food to the growing plant, soil moisture, soil temperature, tillage, nitrification and fertilizers.

b, Microscopic examination of soils, mechanical analysis by "beaker method." Determination of organic matter, capillary effects upon the soil of the application of direct and indirect manures.
King's Soils.

3 W.—Geology, a 5. 9:30-10:30. Prof. Chilcott.
Pre. 1. Required in groups A, C and D.

a, Geological ages, stratified, igneous and sedimentary rocks, crystalography, dip, folds, cleavage, volcanoes, rivers, glaciers, erosion and deposition.
LeConte's Elements of Geology.

4 F.—Soil Fertility, a 3. 10:30-11:30. Prof. Chilcott.
Pre. 2. Required of all students in Agriculture.
a, A study of manures and manuring. Nitrification, leguminous crops for green manuring. Conservation of fertility by rotation of crops. Economic sources of the elements of fertility.
Aikman's Manures and Manuring.

5 W.—Agricultural Experimentation, b 3. 2:00-4:00. Prof. Chilcott.
Pre. 1, 2, 3 and 4. Required of all students in Agriculture.
b, A general study of experimental work as pursued by the experiment stations of this country, study of the bulletins and reports of the various stations and a comparison of their results and methods.
Experiment Station Record. U. S. Department of Agriculture and Experiment Station publications.

DEPARTMENT OF ZOOLOGY AND VETERINARY MEDICINE.

Zo.

PROFESSOR MOORE.

The work in this department is offered consecutively. Recent biological discoveries are given special consideration. The lecture room and laboratories are well supplied with water and gas. The equipment includes microscopes, dissecting instruments, sliding microtome, imbedding apparatus, thermostat incubator, autoclave, sterilizers, fossils, models and charts. The subsequent courses are descriptive of the work offered:

1 F.—Elementary Zoology, { a 4. 10:30-11:30. / b 1. 2:00- 4:00. }
Required of all students.
a, Discussion of types of branches and classes of animals.

b, Dissection of typical invertebrates and vertebrates.
Text book to be announced.

2 S.—Advanced Physiology, a 5. 8:30-9:30.
Pre. 1, Ph. 2 and Ch. 2. Required in groups A, C and D.
a, The principles of animal physiology with demonstrations and experiments.
Thornton's Physiology.

3 W.—Advanced Zoology, a 2, b 1. 11:30-12:30.
Pre. Pr. 12, Zo. 1. Required in group A, B and C.
a, discussion of the development, the principles of classification and comparative anatomy of animals.
b, Dissection of invertebrates and vertebrates.

4 F.—Anatomical Methods, { a 3. 8:30- 9:30. / b 2. 8:30-10:30.
Pre. 1. Required in Group D.
a, Facts of general morphology, osteology and orthrology.
b, Dissections.

5 W.—Anatomical Methods, { a 3. 9:30-10:30 / b 2. 8:30-10:30.
Pre. 4. Required of students in group D.
a, Splanchnology and Myology.
b, Dissections.

6 S.—Anatomical Methods, { a 2. 3:00-4:00. / b 3. 2:00-4:00.
Pre. 5.
a, Augiology and Neurology.
b, Dissections.

7 F.—Veterinary Medicine, a 5. 3:00-4:00.
Pr. 12, Zo. 3, 4, 5 and 6 and Ph. 4, 5 and 6, can with advantage be taken before Zo. 7. Required of all students in Agriculture.
a, Diseases of the respiratory and digestive systems.

8 W.—Veterinary Medicine, a 5. 2:00-3:00.
Pre. 7.
a, Diseases of the skin and locomotory apparatus.

9 S.—Veterinary Medicine, a 5. 2:00-3:00.
Pre. 8.

a, Contagious and infectious diseases, their symptoms and treatment, special reference to their eradication and control.

10 W.—Veterinary Medicine, a 3. 11:30-12:30.

a, This course is designed to meet the requirements of those students taking the short courses in Agriculture and Dairying, and will include a discussion of the more important diseases of farm animals.

11 S.—Bacteriology, { a 2. 9:30-10:30. / b 3. 8:30-10:30.

a, Bacteriological methods, the principle of sterilization, preparation of culture media, making and examining cultures, etc.

b, Laboratory.
Sternberg's Bacteriology.
Abbott's Bacteriology.
Moore's Laboratory Directions for Beginners in Bacteriology.

DEPARTMENT OF LANGUAGES.

Ln.

PROFESSOR WHEELER; MISS DUBOIS.

In offering increased work in language, the institution supplies a deficiency which has for some time been recognized. The student pursuing work along scientific or technical lines is virtually compelled to have some knowledge of either German or French, while the importance of Latin is recognized by almost everyone.

Two years of language is required for the degree of Bachelor of Science in groups A and C, and one year in groups B

and D. This work should be consecutive in whatever language the students elects. In such technical "majors" as Engineering, French is advised, in most of the natural or biological sciences German will be found preferable, while in the more literary work Latin is the most appropriate.

The following work in Latin, German and French is offered, viz:

1 F.—Latin, a 5. 3:00-4:00. Miss DuBois.
Pre. Eh. 3.

a, Primary principles of the language, including inflections and easy syntax, with constant drill in the vocabulary necessary for reading Cæsar.
Bellum Helveticum.

2 W.—Latin, a 5. 3:00-4:00. Miss DuBois.
Pre. Eh. 3.

a, Continuation of 1, more attention to etymology and syntax by means of daily translations from English into Latin.
Bellum Helveticum.

3 S.—Latin, a 5. 3:00-4:00. Miss DuBois.
Pre. 2.

a, Completion of Bellum Helveticum with continuation of syntax and composition.

4 F.—Latin (Cæsar,) a 5. 9:30-10:30. Miss DuBois.
Pre. 3.

a, Selections from Cæsar and Nepos, thorough study of Latin Grammar, with daily exercises in prose composition.
Arrowsmith's Cæsar.
Allen & Greenough's Latin Grammar.

5 W.—Latin, (Virgil,) a 5. 10:30-11:30. Miss DuBois.
Pre. 4.

a, Translation of Books I and II of the Aeneid with special attention to rhetorical figures and mythological references as well as to scansion and different styles of Latin poetry, with prose composition every day.

6 S.—Latin (Virgil,) a 5. 10:30-11:30. Miss DuBois.
Pre. 5.

a, Translation of Books III and IV of the Aeneid with continuation of work indicated in 5.

NOTE.—In addition to the above work in Latin, the following three courses are offered for the benefit of graduate students or others who may have the opportunity to continue their study of this language. Hours must be arranged for to suit teachers and students.

F.—Latin (Virgil,) a 5. Miss DuBois.

a, Books V and VI of the Aeneid, with daily exercises in rendering English into Latin.

W.—Latin (Virgil,) a 5. Miss DuBois.

a, Study of first, second and third of Cicero's Orations against Catiline, advanced syntax, and careful consideration of this period of Roman history.

S.—Latin (Cicero,) a 5. Miss DuBois

a, Cicero's Orations continued, the fourth against Catiline, followed by the Manilian Law or Poet Archives, with Roman history and Latin syntax.

7 F.—German, a 5. 3:00-4:00. Prof. Wheeler.
Pre. Eh. 3.

a, Introductory course, elementary grammar, pronunciation, elementary exercises in translating from English into German and German into English. Reading in this course will be begun early.
Joynes-Meissner's Grammar. Part I.

8 W.—German, a 5. 3:00-4:00. Prof. Weeeler.
Pre. 7.

a, Grammar, reading, translation of easy sentences from English into German, translation at sight and by ear, dictation exercises and memorizing of selected passages of prose and poetry. Exercises in conversation, translation of selected stories and easy poems.
Joynes-Meissner's Grammar. Part I.

9 S.—German, a 5. 3:00-4:00. Prof. Wheeler.
Pre. 8.

a, Continuation of course 8 with special drill on irregular verbs and idiomatic expressions. A considerable amount of easy German prose will be read in this course and the more difficult passages accurately translated.
Joynes-Meissner's Grammar. Part I.

10 F.—German, a 5. 9:30-10:30. Prof. Wheeler.
Pre. 9.

a, Grammar, derivation and composition of words, composition based on the works read. A large amount of reading on various topics selected from the works of nineteenth century writers will be done in this course. Translation at sight and by ear.
Joynes-Meissner's Grammar will be used for reference. Parts II and III.

11 W.—German, a 5. 10:30-11:30. Prof. Wheeler.
Pre. 10.

a, Grammar, advanced study of syntax, composition, German literature of the classical period. Selections from the works of Schiller and Goethe will be read and the more difficult passages explained and translated. The life and times of Goethe and Schiller will be discussed in the class. Rapid dictations on subjects connected with the literature of this period.
Joynes-Meissner's Grammar for reference. Parts II and III.

12 S.—German, a 5. 10:30-11:30. Prof. Wheeler.
Pre. 11.

a, Course in scientific German designed to familiarize students with the more common terms used in the sciences. Extensive reading and translation. Composition and dictation exercises on scientific subjects.
Dippold's Scientific German Reader will be used as the basis of the work.

13 F.—French, a 5. 8:30-9:30. Prof. Wheeler.
Pre. Eh. 3.

a, Grammar and special drill in pronunciation. Translation of easy English sentences into French. Elementary reading and translation.
Muzzarelli's French Course, I Year.
Super's Reader.

14 French, a 5. 9:30-10:30. Prof. Wheeler.
Pre. 13.

a, Pronunciation and grammar, translations into French, translations at sight and by hearing, dictation exercises, memorizing of selections of prose and poetry.
Muzzarelli's French Course, I Year.
Super's Reader.

15 S.—French, a 5, 9:30-10:30. Prof. Wheeler.
Pre. 14.

a, Grammar continued, idioms and syntax, study of the subjunctive mode and irregular verbs, translation at sight and by ear, memorizing of prose and poetry, dictation and conversation exercises. In this course a large amount of easy French will be read.
Muzzarelli's French Course, II Year.

16 F.—French, a 5. 2:00-3:00. Prof. Wheeler.
Pre. 15.

a, Continuation of course 15. Grammar, composition based upon the works read, reading and translation of a large number of selections drawn from the works of the nineteenth century writers. Dictations.
Muzzarelli's French Course, II Year.

17 W.—French, a 5 2:00-3:00. Prof. Wheeler.
Pre. 16.

a, Grammar and composition. Several easy classical plays will be read and the lives of the most important writers and

the customs of the seventeenth century will be discussed
Dictations upon literary subjects once a week.
Muzzarelli's French Course, II Year.

18 S.—French, a 5. 2:00-3:00. Prof. Wheeler.
Pre. 17.

a, In this course a large amount of scientific French will be read and selected passages carefully translated. Translation by ear and at sight, dictation exercises on scientific subjects.
Luquieu's La Science Populaire will be used.

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE.

Eh.

PROFESSOR EVERLY; MISS DUBOIS.

In this department the aim is to make the study of language and literature practical in the fullest sense of the term. Language is regarded as an instrument for the performance of a large part of the most important and most delicate work of life. Literature is analyzed largely with a view of discovering principles and processes of thought building the student may embody in original composition. An effort is made also to help the student find truths that will guide him in reading, heighten his appreciation of good literature, and quicken his conception of life.

Owing to recent changes in the courses of study of this department, the advanced work outlined below will be modified to suit the needs of students who have already begun on their elective work.

1 F.—Rhetoric, a 5. 8:30-9:30. Miss DuBois.
Required of all students.

a, The choice of words, phraseology, and special objects of

style. Genung's Outlines of Rhetoric is used as a guide, but many exercises are taken from Hill's Foundations of Rhetoric; the Sir Roger de Coverly Papers in the Spectator. Students beginning this course are expected to have a practical knowledge of the facts of some advanced grammar. If they are only slightly deficient in this knowlege they may make up the deficiency by taking, along with the Rhetoric during the Fall term, instruction in a special class in Buehler's Practical Exercises.

2 W.—Rhetoric, a 5. 10:30-11:30. Miss DuBois.
Pre. 1. Required of all students.

a, Continuation of course 1. The sentence and the paragraph. Much use is made of Scott & Denney's Composition-Rhetoric, Milton's L'Allegro, Il Penseroso, Comus and Lycidas.

3 S.—Rhetoric, a 5. 9:30-10:30. Miss DuBois.
Pre. 1 and 2 Required of all students.

a, Continuation of course 2 The whole composition. Many subjects are chosen from
De Quincey's Flight of a Tartar Tribe, Macaulay's Essay on Milton, and Burke's Speech on Conciliation with America.

4 F.—American Literature, a 5. 10:30-11:30. Prof. Eyerly.
Pre. 3. Required of all students.

a, A general survey of American literature and a study of a few of the most important works.
Occasional essays on assigned topics.

5 W.—English Literature, a 5. 9:30-10:30 Prof. Eyerly.
Pre. 4. Required of all students

a, An historical view of English literature and the study of some representative masterpieces.
Occasional essays on assigned topics.

6 W.—English Classics, a 3. 2:00-3:00 Prof. Eyerly.
Pre. 1, 2 and 3.

a, Reading of some of the books prescribed by the joint conference of colleges and secondary schools on Requirements

in English for Admission to Colleges.
George Eliot's Silas Marner.
Pope's Translation of the Iliad. (Books I, VI, XXII and XXIV.)
Goldsmith's Vicar of Wakefield.

7 S.—English Classics, a 3. 2:00-3:00. Prof. Eyerly.
Pre. 1, 2, 3 and 6.

a, Continuation of Course 6.
Scott's Ivanhoe.
Shakespeare's Macbeth.
Cooper's Last of the Mohicans.
Tennyson's Princess.
Coleridge's Ancient Mariner.
Lowell's Visions of Sir Launfal.

8 F, W and S.—Oratory and Argumentation. 11:30-12:30. Prof. Eyerly.

a, The study of master pieces of oratory and argumentation. This work continues throughout the year, three times a week in the Fall term, and once a week in the Winter and Spring terms. Each member of the class must prepare and deliver in public at least three original productions. All candidates for the Bachelor's degree are required to take this course and should do so duriug the Junior year. At the close of the year a Junior contest is held. (See Page 54, Part "D.")

9 F.—Advanced Rhetoric, a 5. 3:00-4:00. Prof. Eyerly.
Genung's Practical Rhetoric and Rhetorical Analysis.

10 W.—Advanced Composition, a 5. 3:00-4:00. Prof. Eyerly.
Pre. 9.

a, Exercises in description, narration, exposition and argumentation.
Lectures.

11 S.—Modern Essayists, a 5. 3:00-4:00. Prof. Eyerly.
Pre. 9 and 10.

Lamb, DeQuincey, Macaulay, Carlyle, Emerson and Matthew Arnold.

12 F. Shakespeare, a 5. 2:00-3:00. Prof. Eyerly.
Twelve plays studied in class.

13 W.—Tennyson or Browning, a. 8:30-9:30. Prof. Eyerly.

14 S.—Modern Fiction, a 5. 10:30-11:30. Prof. Eyerly.
Scott, Dickens, Thackeray and George Eliot.

DEPARTMENT OF HISTORY, ECONOMICS AND PHILOSOPHY.

H-P.

DR. HESTON; MR. HARDING.

The work in History and Economics is designed to give that information and training which are requisite to intelligent citizenship; to enable the students to trace the genesis and development of political institutions, and especially to awaken in him an enthusiasm for personal individual effort. Courses 1-3 should precede all work in political science, sociology and economics. Especial effort is made in courses 1 and 2 to aid the student in acquiring habits of careful and systematic use of the material with which he works. In the more advanced courses students are sent to original sources of information so far as possible. The topical and library methods are for the most part adopted as best calculated to develop the individual powers of the student.

The studies in Philosophy are intended to help the student form habits of close, careful and logical analysis and reasoning; to interest him in considering questions of a subjective character and those which pertain more especially to his own rational nature and the organism of the state. The work is begun by a study of Psychology from a biological

standpoint. Man as an individual is first considered and then as a part of the social organism where he becomes a factor in the social and political forces of the world. Text books are used where they are found to be of real service, supplemented by lectures and class discussions based on assigned readings and original and individual work of students.

The following courses are offered:

1 W.—General History, a 5. 8:30-9:30. Mr. Harding.
Pre. Eh. 3, Ms. 4. Required of all students.

a, History of Europe to the division of Charlmagne's empire with brief preliminary survey of Oriental history; text book, reference work, special study of a few carefully selected sources and training in the preparation of historical papers.
Adams' European History to Part V.

2 S. General History, a 5. 10:30-11:30. Mr. Harding.
Pre. 1. Required of all students.

a, Continuation of 1. The middle ages, reformation and renaissance periods, rise and development of modern nations.
Adams' European History, Part V—end.

3 F.—English History, a 5. 8:30-9:30. Mr. Harding.
Pre. 1 and 2. Required in groups A and C.

a, General survey of the history of England. Special attention given to the growth of those political and social institutions from which our own are derived.
Text book, discussions, and study of assigned sources.

4 F.—U. S. Economic History, a 5. 3:00-4:00. Dr. Heston.
Pre. 1 and 2.

a, A study of household industries in the colonies, colonial commerce, internal transportation, invention of agricultural implements, labor organizations, monetary disturbances, tariff legislation. Emphasis will be placed on the organic conception of industrial society and an effort made to understand our different industrial situations.
Lectures and assigned readings.

5 W.--American History, a 5. 2:00-3:00. Mr. Harding.
Pre. 1, 2 and 3.

a, Constitutional and political history of the United States from 1765 to 1865. The growth of union, formation of the constitution, development of nationality, conflict between nationality and slavery. This course pre-supposes an elementary knowledge of U. S. history. Lectures, topics, reports, study of assigned sources.

Channing's Student's History of the United States.

6 S.—American Institutions, a 5. 8:30-9:30. Mr. Harding.
Pre. 1, 2 and 3. Required in groups A, C and D.

a, A study of the structure, nature and working of American governmental and political institutions, federal and state; the federal system, constitutional interpretation, working relations of the national and state governments, state and territorial system, party machinery and methods, nature and action of public opinion. Supplemented by lectures on political science and American constitutional law.
Bryces' American Commonwealth. (Abridged edition.)

7 S.—Psychology, a 3. 11:30-12:30. Dr. Heston.
Pre. Eh. 6, Ms. 6, Bt. 2, Zo. 3, Ph. 3, Ch. 3 and H-P. 1-3.
Required of all students.

a, Study of nervous mechanism at disposal of the mind. Discussion of various phases of mental activity. Special attention given to the cultivation of mental faculties and will power.
Halleck's Psychology and Psychic Culture.
Lectures and discussion.

8 F.—Sociology, a 3. 11:30-12:30. Dr. Heston.
Pre. 7. Required of all students.

a, This course is designed to introduce the student into the rich field of social science. He is here required to familiarize himself with the principal forms of social organizations:

the thoughts, sympathies, purposes and virtues that make society possible; with the benefits society confers and the conduct that worthy membership of it requires. Such study lies at the foundation of all further consideration of social problems.
Gidding's Elements of Sociology.
Lectures and discussions.

9 F.—Municipal Government, a 3. 10:30-11:30. Mr. Harding. Pre. 3, 5 and 6.

a, A study of municipal government, with particular reference to the legal relation of the city to the state, and to the economic and social problems of American cities. Discussions, reports and papers.
Goodnow's Municipal Problems.

10 F.—American Territorial Development, a 2. 10:30-11:30. Mr. Harding. Pre. 5 and 6.

a, A history of annexations, including recent island acquisitions. Also lectures upon the western movement of the American people, distribution of population, institutional life, influence of frontier conditions upon nationality, democracy, slavery, and the development of the American type of man. Lectures and readings.
Caldwell's Territorial Development.

11 F.—Comparative Constitutional Development, a 3. 2:00-3:00. Mr. Harding. Pre. 6.

a, A comparative study of the constitutions and governments of the chief European nations. Lectures, discussions and reports.
Woodrow Wilson's "The State."

12 W.—Economics, a 3. 10:30-11:30. Dr. Heston.
Pre. 8. Required of all students.

a, The effort here is to point out the true field of economic study, its leading features and practical bearing on the industrial affairs of life, also to get a correct view of various

economic theories and their applications to our industrial activities.
Ely's Outlines. (Books I and II.)
Lectures and collateral reading.

13 W.—Public Economics, a 2. 10:30-11:30. Dr. Heston.
Pre. 7 and 8. Required in groups A. C and D.
a, Continuation of 7. Taking up a study of the relation of the state to the productive activities of society and the duties of society to its various dependent classes.
Ely's Outlines. (Book IV.)
Collateral readings.

14 W.—International Law, a 5. 9:30-10:30. Mr. Harding.
Pre. 5, 6 and 8.
Sources of international law examined. Rights and obligations of nations connected with peace, war and neutrality. Lectures on treaty making and national comity. Class discussions and papers.
Lawrence's International Law.

15 S.—Ethics and Pedagogy, a 5. 10:30-11:30. Dr. Heston.
Pre. 7, 8 and 12. Required of all students.
a, The course in Ethics includes a study of Ethical principles, grounds of governmental authority. discussions on conduct of individuals and nations.
Hickok's Moral Science.
The aim in Pedagogy is to show the application of Psychology to general teaching methods and processes.
Lectures and selected readings.

16 S.—Public Finance, a 3. 2.00-3:00 Mr. Harding.
Pre. 12 and 13.
a, A study of public revenues, public expenditures and methods of financial administration, special attention to problems of taxation and to municipal finances, revenues and franchises. Lectures and discussions.
Plehn's Elements of Finance.

17 S.—Currency and Banking, a 2. 2:00-3:00. Mr Harding. Pre. 12 and 13.

a, The functions of money and credit. Theory and history of banking. Discussions and papers, collateral reading in Walker, Jevons and Mill.

Dunbar's History and Theory of Banking.

DEPARTMENT OF MATHEMATICS AND ASTRONOMY.

Ms.

DR. BROWN; MR. CRANE.

The general work of this department is planned with the view of cultivating in the student habits of systematic and accurate thinking as well as of giving a knowledge of methods in dealing with the practical problems that may arise in college work and in future life. Independent effort is encouraged to the greatest possible extent, the solution of problems and original demonstrations forming an important part of each course. In mathematics, courses 1, 2, 3, 4, 5, 6 and 7, mentioned below are required of all students, and course 8 in addition of all male students, for graduation. In addition to these, other courses are offered for election, including the prerequisites required in the other departments, together with subjects designed primarily for students who may wish to pursue special work in mathematics.

In Astronomy one course is required for graduation. This is intended to give such a knowledge of the science as an educated person should possess. A course in Practical Astronomy is also offered for election. The class room work of both these courses is supplemented by the use of instruments in the observatory. These include a five inch equatorial tele-

scope, a transit instrument, a sidereal clock and a chronograph.

The following courses are offered:

1 F.—Algebra, a 5. 9:30-10:30. Mr. Crane.
Required of all students.

a, The fundamental operations, simple equations; factors and multiples.
Milne's High School Algebra to p. 99.

2 W.—Algebra, a 5: 9:30-10:30. Mr. Crane.
Pre. 1. Required of all students.

a, Fractions, simultaneous equatious of the first degree, involution and evolution.
Milne's High School Algebra from p. 99 to p. 191.

3 S.—Algebra, a 3. 8:30-9:30 Mr. Crane.
Pre. 2. Required of all students.

a, Theory of exponents, radical quantities, quadratic equations, logarithms.
Milne's High School Algebra.

4 S.—Geometry, a 2. 8:30-9:30. Mr. Crane.
Pre. 2. Required of all students.

a, Fundamental concepts, triangles, parallels and parallelograms, quadrilaterals. To be taken with course 3.
Milne's Plane and Solid Geometry.

5 F.—Geometry, a 5. 8:30-9:30. Mr. Crane.
Pre. 4. Required of all students.

a, Limits, the circle, similar figures.
Milne's Plane and Solid Geometry.

6 W.—Geometry, a 5. 10:30-11:30. Mr. Crane.
Pre. 4 and 5. Required of all students.

a, Areas, regular polygons, mensuration of the circle; elements of solid geometry, with numerous original demonstrations and problems.
Milne's Plane and Solid Geometry.

7 S.—Trigonometry, a 3. 9:30-10:30. Mr. Crane.
Pre. 2 and 5. Required of all students.

a, The trigonometric functions, analytically and graphically; the use of logarithms, the solution of right and oblique triangles.
Wentworth's Trigonometry and Surveying.

8 S.—Surveying, b 2. 2:00-4:00, Mr. Crane.
Pre 7. Required of all male students.
b, Theory of surveying; study of United States Manual of Surveying; field work.

9 F. Algebra, a 2. 10:30-11:30. Dr. Brown.
Pre. 3. Required in group B.
a, A review of the quadratic equations, the progressions, imaginary quantities, inequalities, permutations and combinations, the binomial theorem, logarithms.

10 F.—Geometry, a 3. 8:30-9:30. Dr. Brown.
Pre. 6.
a, Continuation of 6 in the study of Solid Geometry.

11 W.—Analytic Geometry, a 5. 8:30-9:30. Dr. Brown.
Pre. 7 and 9. Required in group B.
a, The point, right line, the conics, the general equation of second degree.
Nichol's Analytic Geometry.

12 S.—Differential Calculus, a 5. 8:30-9:30. Dr. Brown.
Pre. 11. Required in group B.
a, The differential coefficient, the formulas of differentiation, the expansion of functions, successive and partial differentiation, indeterminate forms, tangents and normals, radius of curvature, evolutes and involutes, envelopes, maxima and minima.
Young and Linebarger.

13 F.—Integral Calculus, a 3. 10:30-11:30. Dr. Brown.
Pre. 12. Required in Mechanical Engineering, group B.
a, Integration as the inverse operation of differentiation in-

tegration of rational fractions, integration by rationalization, by substitution, reduction formulas, integration as a summation, rectification of curves, areas and volumes with numerous problems.
Young and Linebarger.

14 F.—Spherical Trigonometry, a 2. 3:00-4:00. Mr. Crane. Pre. 7.

a, The principles of Spherical Trigonometry and applications to problems.

15 W.—Analytic Mechanics, a 5. 3:00-4:00. Dr. Brown. Pre. 13. Required in group B.

a, The application of analytic geometry and differential and integral calculus to the problems of mechanics. The laws of equilibrium, motion, work and energy of particles and rigid bodies.

16 S.—Analytic Mechanics, a 5. 10:30-11:30 Dr. Brown. Pre. 15.

a, A continuation of course 15. Lectures with references.

17 F.—Advanced Analytic Geometry, a 5. 2:00-3:00. Dr. Brown. Pre. 11 and 16.

a, The general equation of the second degree; the analytic geometry of space, the point, plane, straight line, surfaces of the second order.

18 W.—Theory of Equations and Determinants, a 5. In 1901. 2:00-3:00 Dr. Brown. Pre. 9.

19 W.—Differential Equations, a 5. In 1900. 2:00-3:00. Dr. Brown. Pre. 13.
Johnson's Differential Equations.

20 F.—Astronomy, a 5. 9:30-10:30. Dr. Brown. Pre. 7. Required of all students.

a, Astronomical instruments, astronomical coordinates, the earth, moon and sun; the planets, fixed stars and constel-

lations; observations and measurements with the equatorial and the transit instruments.
Todd's New Astronomy.

21 S.—Practical Astronomy, a 3. 3:00-4:00. Dr. Brown.
Pre. 7 and 14.
a, Astronomical problems; use of ephemeris.

DEPARTMENT OF PHYSICS AND ELECTRICAL ENGINEERING.

Ph.

PROFESSOR MATHEWS; MR. HOY.

The various courses are offered for four classes of students.

First:—Those who desire to take a scientific course where it would be necessary to take physics as a foundation subject.

Second:—Those wishing to gain some knowledge of the elementary principles of physics in order to fit themselves for teachers of science in our high schools.

Third:—Those wishing to make physics their major subject.

Fourth:—Those who desire such work as will help in fitting themselves for electrical engineers.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is a necessity to every student seeking a scientific training, the department has been well fitted with room and appliances to provide this training. Its lecture room is well provided with arm-rest chairs. The advanced laboratories are provided with non-vibratory piers, and opaque shutters for darkening the rooms for work in optics. Water, gas and electricity are provided for the recitation room, the dark room and the laboratories. Several volumes of

reference books upon the various lines of physics are kept in the department for the use of students.

The laboratory equipment includes such expensive pieces as analytical balances, cathetometer, laboratory clock making electrical contact every second, spectroscope, microscopes and photometer, stereopticon (arc light,) Carhart-Clark standard cell, dynamo, electro-motor, galvanometers, storage battery, induction coils, ammeter, magnetometers, voltmeters, Wheatstone bridges and X-ray apparatus. A desirable arrangement of work for those who wish to take electrical engineering is shown on page 72. The following is the list and descriptions of the courses offered in this department:

1 W.—Elementary Physics, { a 3. 8:30-9:30. / b 2. 2:00-4:00. } Prof. Mathews.

Pre. Ms. 1. Required of all students.

a, Properties of matter; mechanics of solids, mechanics of fluids, sound and heat.

b, Laboratory work showing principal phenomena and proving laws governing them in properties of matter, mechanics of solids, mechanics of fluids, sound and heat.

Avery's Elementary Physics to chapter V.

Chute's Practical Physics—Laboratory Manual.

2 S.—Elementary Physics, { a 3. 10:30-11:30. / b 2. 2:00- 4:00. } Prof. Mathews

Pre. 1 and Ms. 2. Required of all students.

a, Light magnetism, static and current electricity.

b, Laboratory work in refraction and reflection of light, color, magnetism, static electricity, arrangement of batteries, detection of the electric current and its direction, induced currents and measurements of electrical resistances.

Avery's Elementary Physics complete from chapter V.

Chute's Practical Physics—Laboratory Manual.

3 F.—General Physics, { a 3. 10:30-11:30. / b 1. 10:30-12:30 or 2:00- 4:00. } Prof. Mathews. Pre. 1, 2 and 7. Required of all students.

a, Mechanics of solids and liquids, heat, magnetism, static electricity, with numerous examples.

b, Exact measurements of mass, distance, time, calorimetry and study of electrical and magnetic fields.

Hastings and Beach. Austin and Thwing.

4 W.—General Physics { a 3. 10:30-11:30. / b 1. 10:30-10:30 or 2:00- 4:00. } Prof. Mathews. Pre. 3.

a, Electricity and its applications in the dynamo, motor, transformer, electric light, etc.; velocity of sound, refraction and reflection of light.

b, Laboratory work on topics mentioned in (a.)

Hastings and Beach.
Austin and Thwing.

5 F.—Advanced Physics, { a 3. 8:30-9:30. / b 2. 2:00-4:00. } Prof. Mathews.

Pre. 1, 2 and 3, Ms. 7 and 12. Required in group B.

a, Mechanics, kinematics, kinetics, mechanics of fluids, and heat and its applicatious.

b, Laboratory work and measurements covering topics mentioned in (a.)

Nichols and Franklin, Vol. I.
Nichols' Laboratory Guide.

6 W.—Advanced Physics. { a 3. 9:30-10:30. / b 2. 9:30-11:30. } Prof. Mathews.

Pre. 5 and Ms. 12. Required in Mechanical Engineering, in group B.

a, Magnetism, electricity, electrolysis, induction currents, primary batteries, electric oscillations and waves.

b, Laboratory work on topics of (a.)

Nichols and Franklin, Vol. II. Nichols' Laboratory Guide.

7 S.—Advanced Physics, { a 3. 9:30-10:30. / b 2. 2:00- 4:00. } Prof. Mathews.

Pre. 6 and Ms. 12.

a, Nature and motion of sound, physical theory of music, na-

ture and propagation of light, refraction, reflection, interference, color and polarization.

b, Laboratory work on topics of (a.)
Nichols and Franklin, Vol. III.
Nichols' Laboratory Guide.

8 F.—Heat, { a 3. 3:00-4:00. / b 2. 2:00-4:00. } Prof. Mathews.
Pre. 7 and Ms 12.

a, Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity and dynamical equivalent of heat.

b, Laboratory work covering topics mentioned in (a.)
Preston's Theory of Heat.
Maxwell's Heat.

9 W.—Sound, { a 3. 2:00-3:00. / b 2. 2:00-4:00. } Prof. Mathews.
Pre. 7 and Ms. 12.

a, A mathematical study of sound and the theory of music.

b, Advanced laboratory work in sound.

10 S.—Light, { a 3. 8:30-9:30. / b 2. 2:00-4:00. } Prof. Mathews.
Pre. 7 and Ms. 12.

a, Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms, and polorization.

b, Laboratory work along same line as (a.)
Preston's Light.

11 F.—Electricy and Magnetism, { a 3. 2:00-3:00. / b 2. 2:00-4:00. } Prof. Mathews. Pre. 6 and Ms. 13.

a, Magnetism, static electricity, electric capacity, magnetomotive force, electro magnets, electrodynamometers, grouping of cells, methods of measuring magnetism, current strength,

voltage and resistance, thermo-electricity, dynamo, alternators, accumulators and transformers.

b, Laboratory work on the above topics.

Thompson's Electricity and Magnetism.
Gray's Absolute Measurements in Electricity and Magnetism.
Carhart and Patterson's Electrical Measurements.

12 W.—Dynamo Electric Mach., { a 3. 9:30-10:30. / b 2. 9:30-11:30. } Mr. Hoy.

Pre. 7 and Ms. 12. Required in Electrical Engineering, Group B.

a, Theory, magnetic circuit, equation and computation of parts of dynamo, construction of armature and field magnets and types of dynamos.

b, Computation and construction of parts of small dynamos.

Thompson's Dynamo Electric Machinery.
Wi[redacted]er's Dynamo Electric Machinery.

13 S.—Dynamo Electric Mach., { a 3. 9:30-10:30. / b 2. 2:00- 4:00. } Mr. Hoy.

Continuation of course 7.

14 F.—Alternating Currents. { a 3. 10:30-11:30. / b 2. 10:30-12:30. } Mr. Hoy.

Pre. 13 and Ms. 12.

a, Theory of alternating currents, and the study of dynamos, motors, transformers, etc.

b, Laboratory work on topics of (a.)

Jackson's Alternating Currents.

15 W.—Elec. Light & Power Distribution, { a 3. 8:30- 9:30. / b 2. 8:30-10:30. }

Mr. Hoy. Pre. 14 and Ms. 12.

a, Electric lighting, methods of wiring, efficiency of transmission, cost of material and construction.

b, Laboratory work on topics of (a.)

16 S.—Design of Power Stations, { a 3. 8:30- 9:30. / b 2. 8:30-10:30. } Mr. Hoy.

a, Location of power plant Best arrangement of machinery to conserve cost, space, etc.

b, Drawing room work in designing.

DEPARTMENT OF MECHANICAL ENGINEERING

Me.

PROFESSOR SOLBERG; MR. HOY.

The object of the work offered is to give students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become practically familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual methods of text book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction which he receives. Hence the work of the class room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shops constructs and operates such machines. It is believed that those who complete this course will be fitted to fill responsible positions in manufacturing establishments. It is important that French be elected as the language that is required in addition to English.

The work-shops are supplied with a large variety and quantity of tools. The wood shop is furnished with twenty sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw and a complete set of tools

for each. There is also a variety of special tools for wood working.

The machine shop is furnished with engine lathes, planer, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 25 H. P. Atlas engine. A supply of instruments for testing work, such as indicators, planimeters and tachometers are at the disposal of the students of the department.

Two courses in Agricultural Drawing and Designing are offered. Additional work along this line will be given to students who desire it.

A large number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the college.

The following work is offered:

1 F. & W.—Carpentry, b 3. 2:00-4:00. Prof. Solberg.
Required of all male students.

b, Talks on the care and use of different tools. Practice at the bench in making the various joints used in wood construction.

2 W.—Wood Turning, b 3. 2:00-4:00. Mr. Hoy.
Required in group B.

b, Wood turning in hard and soft woods.

3 F., W. & S.—Forging, b 3. 2:00-4:00. Mr. Hoy.
Required of all engineering students.

b, Bending, drawing, upsetting, welding and forming iron.

3c F., W. & S.—Forging (steel,) b 2. 2:00-4:00. Mr. Hoy.
Required of all engineering students.

b, Steel manipulation, including cold chisels, punches and lathe and planer tools. tempering and hardening.

4 F., W. & S.—Machine Shop, b 2. 2:00-4:00. Mr. Hoy.
Required in group B.

b, Filing, clipping and fitting, work with different machines, such as lates, planer and drill press.

4c F., W. & S.—Machine Shop, b 3. 2:00-4:00.
Required in group B.
b, Construction of some machine or appliance from designs made in drawing room.

5 F., W. and S.—Mechanical Drawing. 2:00-4:00. Prof. Solberg. Pre. Ar. 1.
b, Instrumental drawing, geometrical problems, and parts of machines.
This work is offered during the entire year, and at hours convenient to teacher and students.

5c F.—Architectural Drawing, b 5. 2:00-4:00. Prof. Solberg. Pre. Me. 5.
b, Rendered drawings of simple buildings, examples of various orders, giving facility in draughtsmanship, familiarizing students with principles.

6 W. S.—Machine Design. F. } { b 2. b 3. b 2. } 2:00-4:00. Prof. Solberg.
Required in group B

b, Solution of various problems involving the design of simpler parts of a machine.
Klein's Machine Designs.

6c W.—Architectural Design, b 5. 2:00-4:00. Prof. Solberg. Pre. 1 and 2.
b, Principles of planning introduced in practical problems, exercises in composition and details.

7 F.—Kinematics, b 5. 2:00-4:00. Prof. Solberg.
Required of mechanical students in group B.
b, Geometry of machinery, problems in the design of motion transmitting appliances.

8 W.—Engineering Design, b 5, 2:00-4:00. Prof. Solberg.
Required of mechanical students, group B.

b, Solutions in the drawing room of some practical problems in design and making working drawings of same.

8c S.—Engineering Design, b 5. 2:00-4:00. Prof. Solberg.
Required of mechanical students, group B.
Continuation of course 8.

9 F.—Elements of Mechanism, a 5. 9:30-10:30. Prof. Solberg.

a, Elements of machinery, velocity, ratios, graphic representation of speed and acceleration. Motion transmitting parts, such as gears, belts, cams, screws, link work. Automatic feeds, parallel and quick return motions. Designing.
Wood and Stahl.

10 S.—Elementary Mechanics, a 5. 10:30-11:30. Mr. Hoy.
Required in group B.

a, Kinetics, dynamics, statics, friction, pendulum, simple machines with their sub-divisions and many practical examples.
Dana's Elementary Mechanics.

11 S.—Steam Engine, a 5. 8:30-9:30. Prof. Solberg.
Required in group B.

a, Study of the modern steam engine, slide valve, and when in combination with independent cut off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice.
Holmes' Steam Engine.

12 F.—Steam Boilers, a 5. 8:30-9:30. Prof Solberg.

a, Advantages and disadvantages of using the various forms of boilers, methods in construction, tubes and flues, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation.
Wilson and Flather's Steam Boilers.

13 W.—Strains in Framed Structures, a 5. 8:30-9:30. Prof. Solberg.
Required of mechanical students, group B.

a, Graphical determination of stresses under action of static, moving and wind forces.
Green, Vol. 1.

SHORT COURSE IN PRACTICAL STEAM ENGINEERING.

Modern agricultural methods have introduced, in such a marked degree, the steam engine as a substitute for animal power that the consequent growing demand for steam engineers has lead the college to arrange a one year course of study for the special training of steam (especially traction) engineers. Extreme care has been taken only to offer such work as shall prove valuable to the man running the traction engine or other machinery. A relatively large amount of shop work, engine repairing and engine running is introduced, with a proper proportion of recitations in closely allied subjects. Upon the satisfactory completion of this work the student is given a certificate which is virtually the same as a license in this state to run an engine.

This course begins September 26th, 1900, and consists of the following subjects, the description of which will be found under the departments in which they naturally belong. The work of the Fall term is the same as that of the Preparatory year.

(Winter Term, January 2nd--March 27th.)

Pr. 5. Arithmetic, a 5.	8:30-9:30.
Me. 15. Physics of Steam, a 5.	9:30-10:30.
Pr. 9. Civil Government, a 3.	10:30-11:30.
Me. 3. Forging, b 3.	2:00-4:00
Me. 5 Mech. Drawing, b 2.	2:00-4:00.

(Spring Term, April 2nd—June 27th.)

Arithmetic a 5.	8:30-9:30.
Pr. 12. Physical Geography	9:30-10:30.
Me. 16. Steam Engine Lectures, a 5.	10:30-11:30.
Me. 3c. Forging, b 2.	2:00-4:00.
Me. 5. Mech. Drawing, b 3.	2:00-4:00.
Me. 17. Engine Practice, b 5.	4:00-6:00.

DEPARTMENT OF DOMESTIC SCIENCE.

Ds.

MRS. FEULING.

The work of this department is designed not only to give the student a knowledge of the subjects which are so important to the house-keeper or home-maker, but in addition to develop the mind by training the hand, and at the same time teach the science of comfortable, healthful living. As an example, the work in sewing teaches the student how to make the various garments, their appropriateness under different conditions and the methods of manufacture of some of the common fabrics. Attention is given to dining room etiquette and the tasteful arrangement of the table. A course in household sanitation is offered.

The department has ample rooms for its different sections of work which are well supplied with proper equipment such as sewing machines, cooking utensils and charts. A large number of illustrative samples are kept on hand for use in con-

nection with lectures. Many books of reference and leading magazines on the subject are kept in the general library. For scheme of work in Domestic Science, see page 73.

The following courses which are, however, subject to change during the year to meet existing conditions, will describe the work more fully:

1 W.—Cooking, b 3. 2:00-4:00.
Required in group C.
a, Bread making, cooking of meats, pudding, cakes and plain cooking in general.

2 S.—Plain Sewing, b 3. 2:00-4:00.
Required in group C.
b, Practice upon samples of the stitches in every day use, including button hole making, preparing a model book, and making at least two pieces of a suit of underwear.

3 F.—Household Economy, a 5. 2:00-3:00.
Pre. Ch. 1. Required in group C.
a, Lectures on foods and the preparation of same, and upon the general care of dining room and kitchen.

4 F.—Sewing. b 3. 2:00-4:00.
Pre 3.
b, The making of the remainder of the suit of underwear, an unlined dress, and a shirt waist.

5 W.—Sewing, b 5. 2:00-4:00.
Pre. 4.
b, Drafting, cutting, fitting; plain dressmaking.

6 S.—Sewing, b 5. 2:00-4:00.
Pre. 5.
b, Continuation of 5. General dressmaking.

7 F.—Sewing, b 5. 2:00-4:00.
Pre. 1.
b, Art needle work, as embroidery and hem stitching.

8 F.—Cooking, b 2. 2:00-4:00.
b, Especial attention given to preserving, pickling and the preparation of entrees.

9 W.—Cooking, b 5. 8:30-10:30 or 9:30-11:30.
Pre 8.
b, Fancy cooking, menus, dainty methods of serving food and invalid cookery.

10 S.—Cooking, b 5. 8:30-10:30 or 2:00-4:00.
Pre. 9
b, Each girl will take up some special line of cookery.

11 F.—Household Sanitation, a 5. 8:30-9:30.
Pre. 9.
a, Lectures on proper house planning, ventilation and plumbing, care of sleeping rooms, arrangements for sickness and care of invalids.

12 W.—Cooking, b 5. 8:30-10:30 or 2:00-4:00.
b, Continuation of course 10.

SHORT COURSE IN DOMESTIC SCIENCE.

(Jan. 2nd to March 27th.)

In addition to the above regular courses, special work in this and allied departments is offered during the winter term. These courses are intended to furnish sound training and give an impetus to further study when it is not possible to take an extended course. The aim is to make every exercise thoroughly practical and suggestive. A certificate of proficiency will be given to those students who complete in a satisfactory manner the following work:

Cooking, b 3.	8:30-10:30.
Household Art, b 2.	8:30-10:30.
Domestic Dairying, b 2.	10:30-12:30.
Science Lectures, a 3.	11:30-12:30.

Sewing Exercises, b 2, 2:00-4:00.
Horticulture and House Gardening, b 3 2:00-4:00.
Music and Free Hand Drawing as desired.

DEPARTMENT OF ART.

Ar.

MISS CALDWELL.

The work offered in Art is useful in various ways. It occupies a practical field in the study of any of the sciences where drawings and sketches are required. It cultivates the eye to see and the mind to appreciate the beauties of nature. It develops both the practical and æsthetic. It enables the hand to do the will of the mind and to interpret what is seen by the eye. It is of great importance when it comes to the arrangement of a house so as to make it pleasant and attractive.

The department has commodious quarters for each of its special lines of work. It is well provided with casts, such as tablets, figures in relief, busts, full figures of animals and men; still life objects and drawing boards for work in drawing; tools for wood carving; busts and figures for copies in clay modeling and still life objects, easels and studios for work in painting. Special students will be advanced as fast as their ability permits. Books of reference and art magazines are kept in the library for the use of students.

Work is offered in free-hand, perspective, cast and advanced drawing, drawing from life, painting from still life and life, clay modeling and wood carving.

Work required of all students:

1 F. & W.—Freehand Drawing, b 3 2:00-4:00.
b, Pencil drawing in outline from blocks and familiar objects, memory sketches, talks on conventionalization, use of the

line in form, texture and surface, interpretation and general expression.

In addition to the course in Freehand Drawing the department offers an extended course of three years which is designed to give students a thorough knowledge of drawing in the different black and white mediums and of the use of color and decoration. To all who complele this course in a satisfactory manner will be given a diploma of graduation in Art.

Any student taking special work in Art must at the same time pursue such college courses in other departments as the faculty may think best, unless a written reqnest from the parents or guardian is received asking that the student be excused from this additional work.

The work offered is presented in a different manner from that of most departments, but explicitly enough to show the nature of the study each term and amount of time reqnired. The teacher will designate hours.

THREE YEARS' COURSE IN ART.

Remark.—The figures here used after each course indicate number of hours per week.

FIRST YEAR.

FALL TERM.

Pencil Drawing from objects,	3
Wood Carving,	2
Clay Modeling,	1

WINTER TERM.

Elementary Design,	1
Charcoal Drawing from casts,	3
Applied Design in burnt wood and Wood Carving,	2

SPRING TERM.

Charcoal Drawing, Still Life and Flowers,	1
Elementary Work in Color,	4
Design from Flowers,	1

SECOND YEAR.

FALL TERM.

Cast Drawing, full light and shade,	2
Pencil Drawing (sketch class,)	1
Oil Painting (still life,)	3

WINTER TERM.

Applied Design, in wood and clay,	2
Oil Painting,	3

SPRING TERM.

Elementary Work in water color,	4
Pencil Drawing from flowers (applied,)	1

THIRD YEAR.

FALL TERM.

Advanced Oil Painting,	3
Perspective,	1
Advanced Applied Design,	2

WINTER TERM.

Oil Painting,	3
Artistic Anatomy,	2
Pencil Sketching from life,	1

SPRING TERM.

Water Color Painting,	3
Art History,	1
Pen and Ink Sketching,	2

SHORT COURSE FOR PUBLIC SCHOOL WORK,

(Winter and Spring Terms, Jan. 2nd—June 27th.)

This work is designed to help those who expect to teach in the public schools and to lead children to express themselves by simple means in pencil, brush and clay.

Students may take other studies at the same time. See Sub-Freshmen and Preparatory courses.

A certificate of proficiency will be given to all who complete in a satisfactory manner the following:

WINTER TERM.	
Pencil Drawing from objects,	3
Object Modeling in clay,	2
Brush Work in black and white,	1
SPRING TERM.	
Advanced Work in light and shade,	2
Direct Nature study in water color,	3
Principles of Perspective,	1

DEPARTMENT OF MUSIC AND PHYSICAL CULTURE.

Mu.

MISS PRATT; MISS MCNAMEE.

Although comparatively new the department is well equipped. Good pianos are provided for practice and students are expected to keep them in perfect condition.

Two lessons of thirty minutes each are given per week as the regular amount of instruction needed. Piano students are required to practice two hours every day. When students require use of piano more than two hours per day special arrangements must be made.

Any student taking special work in music must pursue whatever courses in other departments the faculty may think best unless a request from parents or guardian is received asking that the student be excused from this additional work. No major can be taken in this department; however, work above the second grade (see below) in both vocal and instru-

mental music can be elected as counting towards a degree according to the general rules.

A special fee of *five dollars* per term is charged all those who take music, either vocal or instrumental. This fee includes the use of pianos as far as facilities permit.

Instruction and practice hours are arranged by the professor and absence from either treated the same as from any other college exercise.

Music students are expected to take part regularly in the public recitals arranged, as in no other way can they secure that self control and confidence so necessary and valuable in a music education.

For the convenience of those who wish to make a specialty of music the piano and vocal instruction offered is here set forth in grades. Each successive grade includes more difficult studies and exercises. The studies thus arranged are intended to give a broad and thorough musical education based not only on the classic masters, but embracing the best works of modern composers.

Theory of Music is taken up with grade III, followed by Harmony and Musical History with grades IV and V.

CERTIFICATE.—Those who complete successfully the first four grades in piano music or the vocal work offered will be given a certificate of proficiency in music.

DIPLOMA.—Students who complete all of the grades in piano work will be given a *diploma* in music.

The following grades in piano music are now offered:

GRADE I.

National Course of Music—Book I.
Supplemented by
Duvernoy's Op. 176.
Schumann's Studies for the Young.

GRADE II.

Mathews' Graded Studies—Books II and III.
Supplemented by
Czerny's Op. 299—Books I and II.
Loeschorn's Op. 66—Book I.
Heller's Op. 47.

GRADE III.

Kuhlau's Sonatinas.
Clementi's Sonatinas.
Heller's Op. 45.
Bach's Short Preludes and Fugues.
Czerny's Octave Studies.
Hayden's Sonatas.
Chopin's Valses.

GRADE IV.

Bach's Two and Three Part Inventions.
Clementi's Gradus ad Parnassum.
Mozart's Sonatas.
Cramer's Etudes, Op. 50.
Chopin's Nocturnes.
Kullak's Octave Studies.
Selections from Mendelssohn's "Lieder Ohne Worte."

GRADE V.

Bach's "Wohltempervites Clavier."
Mochele's Etudes, Op. 70.
Two or more of Beethoven's Sonatas.
Some of the compositions of Schumann and Grieg.
Schubert, Chopin, Beethoven, Handel, Rubenstein.

VOCAL MUSIC.

The work offered in Voice Culture is as follows:

GRADE I.

Art of Phrasing, Respiration.
Tone Placing.
Accentuation and Expression.

GRADE II.

Bonaldi's Exercises in Vocalization.
Reading on Tones.
Franz Abt's Singing.

GRADE III.

Bonaldi's Exercises.
Concone Lecons, (Part I and II.)
Selected Ballads.

VIOLIN MUSIC.

Violin and Mandolin music have been offered under a thoroughly competent teacher; also band training and membership in cadet band.

(This work may not be given during the current year.)

PHYSICAL CULTURE.

Regular physical exercises are required of all and most excellent provision now made for both sexes to secure systematic development of body and graceful carriage through indoor and field exercises.

This work is under careful and efficient supervision. A medical director has charge of the gymnasium exercises, an experienced athletic director of all field sports.

Both sexes have well equipped gymnasiums. Girls are required to take regular class work in free movements with the dumb-bells and clubs and such other exercises as belong to indoor gymnastics according to requirements fully set forth on page 55.

DEPARTMENT OF MILITARY SCIENCE.

Mt.

ACTING COMMANDANT.

The wisdom of the Federal law, requiring military instruction in land grant colleges was forcibly illustrated in the

war with Spain. Students and graduates of these colleges were potent factors in putting the volunteer army into proper condition for actual service.

Male members of the Preparatory department are required to take the drill of the Fall and Spring terms, but may omit the the drill recitations of Winter term.

All male students above the Preparatory department are required to take the work in military offered for the first two years they are connected with the college or until they complete the required number of courses. Male students of the Senior class are also required to take the course in military lectures (Mt. 7.)

No exemption from military duty is allowed except upon excuse by the faculty for physical disability or other grave reasons. When such excuse is granted some other work satisfactory to the faculty must be taken as an equivalent. All the training is of such a nature as to fit young men for the duties of officers. Members of the battalion, holding the highest military rank for this entire college work will, upon graduation, be reported to the Adjutant General of the United States army who will publish their names in the Army Register. From this list officers are selected by appointment of the President of the United States for volunteer service in case of war.

The military work of the institution consists of drill, lectures, and recitations in United States drill regulations. Additional courses will be offered in this department as soon as a military officer is again detailed. The work is as follows:

1 F.—Setting up Drill, 3. 11:30-12:30.
Setting up exercises, military gymanastics and manual of arms.

2 W.—Drill Regulations, a 2. 11:30-12:30.
Pre. 1.

a, Recitations in United States Army Regulations.

3 S.—Drill, 3. 11:30-12:30.
Pre. 2.
Manual of arms and military gymnastics, with target practice.

4 F.—Drill, a 3. 11:30-12:30.
Pre. 3.
School of company and school of battalion.

5 W.—Drill Regulations, a 2. 11:30-12:30.
Pre. 4.
Recitations in U. S. army regulations and lectures on military science.

6 S.—Drill, 3. 11:30-12:30.
Pre. 5.
General drill and target practice.

7 F.—Art of War, a 1. 11:30-12:30.
Pre. 6. Required of male members of the Senior class.

a, Course of lectures on military science designed to fit young men for offices in the regular service.

DEPARTMENT OF PHARMACY.

Py.

PROFESSOR WHITEHEAD.

This work is intended, primarily, to thoroughly teach young men and women the science of pharmacy.

The student may on completion of the courses of the Freshman and Sophomore years of group D given on page 74, receive the degree of Pharmacy Graduate, (Ph. G.) This is the only work of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy.

For the student intending to take up the study of medicine or dentistry, or who wishes to prepare himself to teach the

sciences in the high schools of the state, a continuation of the work of this group to the completion of the Junior and Senior years is recommended. On the completion of the group the student may receive the degree of Bachelor of Science.

1 F.—Scientific Latin, a 5. 10:30 11:30.
Pre. Eh. 3, Ph. 2.

a, Subject is taught with special reference to its application in Pharmacy. The vocabulary employed is strictly pharmaceutioal.

Robinson's Grammar of Pharmacy and Medicine, first 80 pages.

2 F.—Pharmacy, a 5. 8:30-9:30.
Pre. Ch. 3.

a, Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation.
Remington's Practice of Pharmacy.

3 W.—Pharmacy, a 5. 2:00-4:00.
Pre. 2 and Ch. 4.

a, Study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins, extracts and official inorganic salts and compounds.

Wilcox and White.

4 W.—Pharmacy, b 5. 9:30-10:30.
Pre. 2 and Ch. 4.

b, Preparation of waters, syrups, mucilages, etc., mentioned in course 3, and must be taken in connection with it.

Remington's Practice of Pharmacy.

5 S.—Pharmacy, a 5. 9:30-10:30.
Pre. 3 and 4.
a, Solutions, emulsions, powders, pills, ointments, plasters; reading prescriptions.
Remington's Practice of Pharmacy.

6 S.—Pharmacy, b 5. 2:00-4:00.
Pre. Py. 3 and 4.
b, Compounding of prescriptions, making of solutions, emulsions, powders, pills; reading and compounding prescriptions. Must be taken same term as course 5.
Remington's Practice of Pharmacy.

7 F.—Materia Medica, a 5. 9:30-10:30.
Pre. Py. 4.
a, Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency will receive full and careful treatment.

8 W.—Materia Medica, a 5. 10:30.-11:30.
Pre. 7.
a, Continuation of course 7.
Wilcox and White.

9 S.—Materia Medica, a 5. 8:30-9:30.
Pre. 8.
a, Continuation of courses 7 and 8.
Wilcox and White.

10 S.—Drug Assaying, b 5. 4:00-6:00.
Pre. 3 and 4.
b, The drug assaying consists mainly in acquiring knowledge and practice in the preparation of official tests and volumetric solutions and the quantitative determination of the alkaloids found in some of the crude drugs. A short course

in urine analysis is given in connection with drug assaying. Pharmacopœia, Lyon's Pharmaceutical Assaying and Allen's Organic Analysis.

DEPARTMENT OF COMMERCIAL SCIENCE.

C1.

PROFESSOR CROSIER; MR. ORR.

The Commercial Department occupies commodious quarters on the second floor of the central building. Its rooms are exceptionally well suited to the work of the department and are supplied with tables, typewriters, offices for carrying on business transactions such as banking, mercantile and post-office work. There are two distinct courses of study offered in this department, each extending over a period of one year: The Amanuensis or Shorthand course, and the Business or Commercial course. When the student has satisfactorily completed either course he will be given a certificate of graduation. The applicant for graduation in the Amanuensis course must attain a shorthand speed. from general matter, of one hundred words per minute and transcribe the same on a machine at the rate of thirty-five words per minute. He must also show a thorough proficiency in his spelling, use of punctuation marks and other rules of composition and rhetoric. Neatness, thoroughness and speed are required of all. Penmanship and business letter writing, while not scheduled as a part of the regular course, are given particular emphasis throughout the year.

The admission requirements to the work of this department are the same as those to the Sub-Freshman class, except that Physical Geography is not required. No student should attempt either course until he has become proficient in the elementary branches of a common school education. It is

both a waste of time and money to study shorthand and business branches before having formed the habit of correct spelling and neatness in written exercises. Students found to be deficient in any of the Preparatory work will be required to make up the same.

The expenses are the same as for any other work in the institution and far below what is usually charged for such instruction. College charges per term of twelve weeks are *five dollars*, (this includes the use of a typewriter.) Books and stationary cost about that much more per term. Board and room may be had from two and one-half dollars ($2.50) to three and one-half dollars ($3.50) per week. By economic living a student may complete an entire course for about *one hundred and fifty dollars.*

The work is as follows:

AMANUENSIS COURSE.

FALL TERM.

1 F.—Shorthand, b 5. 2:00-4:00. Prof. Crosier.

b, Consonant stems, vowels, diphthongs, initial and final hooks and circles, word signs, etc., in logical order. Elimination of vocalization through position; the habit of coordination emphasized from the beginning.
Graham's Hand Book to page 261.

Eh. 1. F.—Rhetoric, a 5. 8:30-9:30.
For description, see the department of English.

2 F.—Typewriting, b 5. Mr. Orr.

b, Graded exercises on machine to learn key board, care of machine, business letters, law forms, manifolding, and mimeographing, department correspondence, speed practice, binding, folding, and filing of all kinds of typewritten matter. One hour each day during school hours.

Pr. 9 F.—Civil Government, b 5. 9:30-10:30. Mr. Harding.
For description of work. see the Preparatory department.

Military or Physical Culture. 11:30-12:30.

WINTER TERM.

3 W.—Shorthand, b 5. 8:30-10:30. Prof. Crosier.

b, Completion of hand book, observing particularly reporting words signs and contractions, word phrasing, etc., easy business letters and completion of I. C. R.
Graham's Hand Book. Graham's I. C. R.

Eh 2 W.—Rhetoric. a 5. 10:30-11:30.
For description, see the department of English.

4 F. or W.—Bookkeeping, a 5. 10:30-11:30. Prof. Crosier.

a, In all its elementary phases, as journalizing, posting, taking trial balance, closing ledger, changing from single to double entry, etc., paying especial attention to penmanship, neatness and accuracy.
Benton's High School Edition (Completed.)

5 W.—Typewriting, b 5. Mr. Orr.

b, Continuation of work of fall term. One hour each day during school hours. Students are required to transcribe all work taken in shorthand.
Military or Physical Culture. 11:30-12:30.

SPRING TERM.

6 S.—Shorthand, b 2. 9:30-10:30. Prof. Crosier.

b, General dictation from Brown's Business correspondence, Humphrey's Typewriting Manual and Universal Dictation Book, devoting considerable time to law forms. The aim of this term is to familiarize the individual with letters pertaining to all branches of commerce and social life.
Musick's Universal Dictation Book.

7 S.—Commercial Law, a 5. 10:30-11:30.

a, Law in general, contracts, principal and agent, partnership, corporations, sales of personal and real property, bailments and common carriers, negotiable paper, deeds, mortgages and leases, collection laws, legal rates of interest, insurance, patent rights, trade marks and copy-rights. This

work is conducted by the outline method and at the end of each week an original essay of not less than five hundred words is required of each member of the class on the work covered during that period. At the close of term an original disquisition of not less than five hundred words touching upon all the work is required This must be typewritten, bound and in presentable shape to file for future reference.

Spencer's Commercial Law.

8 S.—Typewriting b 5. Mr. Orr.

b, One hour each day during school hours. All work of this term to be from shorthand notes. The purpose of this is to give the student the power to read notes readily and transcribe the same rapidly. A speed of thirty-five words per minute from shorthand notes is required for graduation.

9 S.—Commercial Geography, a 4. 8:30-9:30. Prof. Crosier.

a, This course is intended to give the student a practical knowledge of commercial conditions and methods and thus enable him the better to apprehend business.

Tilden's Commercial Geography.

10 S.—Parliamentary Law, a 1. 8:30-9:30. Prof. Crosier.

a, A short concise course pertaining to the rules and regulation of parliamentary practice.

Lyon's Manual of Parliamentary Law.

Military or Physical Culture. 11:30-12:30.

BUSINESS COURSE.

FALL TERM.

4 F.—Bookkeeping, a 5. 10:30-11:30. Prof. Crosier.

a, For description of work see Amanuensis course.

Completion of Beman's High School Edition.

Eh. 1 F.—Rhetoric. 8:30-9:30. Miss DuBois.

For description of work, see department of English.

11 F.—Intellectual Arithmetic, a 3. 2:00–3:00 Mr. Crane.
a, To qualify the student to make rapid mental calculations. Multiplication table required up to twenty-five inclusive.

Pr. 9 F.—Civil Government, a 5. 9:30-10:30. Mr. Harding.
For description of work, see Preparatory department.

8 Typewriting, b 5. Mr. Orr.
b, One hour each day during school hours. For description, see Amanuensis course.

Military or Physical Culture. 11:30-12:30.

WINTER TERM.

12 W.—Bookkeeping, b 5. 2:00-4:00. Prof. Crosier.
b, Each student carries on regular retail business, through six offices, with the student body. While all transactions are of the same general nature the results are different, thus creating in the individual student a habit of self reliance. All work must be of a certain degree of excellency before the next step can be taken. This term's work comprises four hundred different transactions, together with the necessary letters, checks, drafts, notes, etc., that would naturally attend the same in actual business.
Goodyear's System of Business.

13 W.—Commercial Arithmetic, a 5. 8:30-9:30. Mr. Crane.
a, Short methods in addition, subtraction, multiplication and division, rapid calculation in percentage, interest, discount and ordinary arithmetical processes.
Goodyear's Progressive Arithmetic.

Eh. 2 W.—Rhetoric, a 5. 10:30-11:30. Miss DuBois.
a, For description, see the department of English.

Military or Physical Culture. 11:30-12:30.

SPRING TERM.

14 S.—Business Practice, b 5. 2:00-4:00. Prof. Crosier.
b, Business practice, changing work of previous term into

wholesale and commission business. All transactions are carried out by students in outside colleges thereby approaching, as nearly as possible, actual business. Goodyear's System of Business.

7 S.—Commercial Law, a 5. 10:30-11:30. Prof. Crosier.

a, For description of work see Amanuensis course.

9 S.—Commercial Geography, a 4. 8:30-9:30. Prof. Crosier.

a, For description of work, see Amanuensis course.

10 S.—Parliamentary Law, a 1. 8:30-9:30. Prof. Crosier.

For description of work, see Amanuensis course.

Military or Physical Culture. 11:30-12:30.

SUB-FRESHMAN YEAR.

The work of this year is required for admission to the Pharmacy department and to the regular college courses. It includes subjects which no student can well omit, however technical a training is desired. While these courses serve as a foundation upon which the higher work is based, they are so chosen as to stimulate the desire of the student towards attaining this broader education. At the same time, the work is thoroughly practical to every walk of life. Freehand Drawing and Horticulture are required of both sexes, while Carpentry is required of the boys, and Cooking of the girls. One division of the class will take Carpentry during the Fall term and Freehand Drawing in the Winter term, while the other division will take these subjects in the reverse order.

FALL TERM.

Rhetoric, (Eh. 1.) a 5,	8:30-9:30
Algebra, (Ms. 1) a 5,	9:30-10:30
El. Zoology, (Zo. 1) a 4, b 1,	10:30-11:30
Military 3 or Physical Culture 2,	11:30-12:30
Freehand Drawing (Ar. 1) b 3, or Carpentry (Me. 1) b 3,	2:00-4:00

WINTER TERM.

El. Physics, (Ph. 1) a 3, b 2,	8:30-9:30
Algebra, (Ms. 2) a 5,	9:30-10:30
Rhetoric, (Eh. 2) a 5,	10:30-11:30
Military (Mt. 2) a 2, or Physical Culture, 2,	11:30-12:30
Carpentry, (Me. 1) b 3, (or Cooking, (Ds. 1) b 3) or Freehand Drawing, (Ar. 1) b 3,	2:00-4:00

SPRING TERM.

Algebra, (Ms. 3) a 3; Geometry (Ms. 4) a 2,	8:30-9:30
Rhetoric, (Eh. 3) a 5,	9:30-10:30
El. Physics, (Ph. 2) a 3, b 2,	10:30-11:30
Military 3, or Physical Culture 3,	11:30-12:30
El. Horticulture, (Ho. 1) a 1, b 2,	2:00-4:00

PREPARATORY DEPARTMENT.

Pr.

PROFESSOR KERR.

The work in this department is prequisite to all the other courses offered. Standings from public schools in the state will be accepted and due credit given for same grade of work completed there. The students of this department are under immediate charge of an experienced member of the faculty who superintends their methods of work and strives to secure the forming of correct habits of work and life on the part of all.

The Franklin Literary Society is made up entirely of Preparatory and short course students.

Students will not be admitted to this department unless they show sufficient development and training to carry the work offered.

The following courses are offered:

FALL TERM.

1 Arithmetic, a 5. 9:30-10:30.
Pre. Arithmetic to fractions.
a, Fractions, decimals, denominate numbers, literal quantities and proportion.
Bailey's Comprehensive Arithmetic.

2 English, a 5. 10:30-11:30.
Pre. A fair knowledge of Elementary Grammar.
a, Technical Grammar.
Maxwell's Advanced Lessons.

3 U. S. History, a 5. 2:00-3:00.
a, A brief survey of the principal historic events from the discovery to the beginning of the 19th century.
McMaster's School History to chapter XIX.

4 Bookkeeping, a 3. 8:30-9:30.
a, Single and double entry sets in actual business.
Benton's High School Edition.

Military or Physical Culture.

WINTER TERM.

5 Arithmetic, a 5. 8:30-9:30.
Pre. 1.
a, Percentage, interest, involution, evolution and mensuration.
Bailey's Comprehensive Arithmetic completed.

6 English, a 5. 9:30-10:30.
Pre. 2.
a, Continuation of course 2.
Maxwell's Advanced Lessons.

7 U. S. History, a 5. 2:00-3:00.
Pre. 3.
a, The leading events in U. S. History from beginning of 19th century to present time.
McMaster's School History completed.

8 Bookkeeping, a 3. 3:00-4:00.
Pre. 4.
a, Repetition of course 4.
Benton's High School Edition.
9 Civil Government, a 3. 10:30-11:30.
Pre. 3 and 7.
a, An elementary study of civil institutions, local, state and federal. The township, the school district, the incorporated town, the city and county, historic origin, mode of organization, officers and functions. The state, with special study of the constitution of South Dakota. The nation. branches of government, powers of congress, the relation of the states, careful study of the constitution. Recitations, readings and occasional reports.
McCleary's Studies in Civics.

SPRING TERM.

10 Elementary Physiology, a 5. 8:30-9:30.
a, The anatomy of the chief structures of the human body and their physiology.
Martin's Human Body (briefer course.)
11 English, a 5. 10:30-11:30.
Pre. 2 and 6.
a, Continuation of course 6. The class will take up higher work in preparation for Eh 1.
Maxwell's Advanced Book completed.
12 Physical Geography, a 5. 9:30-10:30.
a, Physiography of the U. S., introduction to Gl. 1.
Davis's Physical Geography.
13 Elocution, a 3 and Reviews, a 2. 3:00-4:00.
a, This course will aim to emphasize the importance of intelligent reading, correct spelling and legible writing, also such other reviews of elementary branches as may be found needful.
Lectures.
Military or Physical Culture.

INDEX.

VIEW OF THE CAMPUS.