

# REPORT

OF THE

## PRESIDENT OF THE UNIVERSITY,

FOR THE YEAR 1873-4.

---

The Academic year began on the 9th day of September, 1873, and ended on the 18th day of June, 1874. With the exception of the legal holidays and the usual recesses separating the terms, the work proceeded without interruption or noteworthy incident. The following tables show the amounts and kinds of work performed in the various departments of instruction, with the names of the officers in charge of each group, assistants being omitted ;

**1. MATHEMATICS AND ASTRONOMY.—PROFESSOR THOMPSON.**

Subject.	Class.	No. Exercises.	No. Students.	Term
Algebra .....	Fourth.	50	61	II.
Algebra, Advanced .....	Third.	50	40	III.
Algebra, Advanced .....	Second.	65	25	I.
Geometry, Plane .....	Third.	65	50	I.
Geometry, Solid .....	Second.	10	31	II.
Trigonometry, Plane .....	Second.	40	31	III.
Trigonometry, Spherical .....	Second.	40	26	III.
Analytical Geometry .....	First.	65	20	I.
Calculus, Differential .....	Junior	65	4	I.
Calculus, Integral .....	Junior	30	2	II.
Modern Geometry, &c. ....	Junior.	40	8	III.
Astronomy, Descriptive .....	First.	40	15	III.
Astronomy, Practical .....	Senior.	34	2	I.

## 2. CHEMISTRY AND PHYSICS—ASST. PROF. PECKHAM.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Chemistry, General.....	Second.	65	32	I.
Chemistry, Applied.....	Sec. Sci.	58	11	II.
Chemistry, Analytical.....	Jun. and Senior.	65	7	I.
Chemistry, Analytical.....	Sen. and First.	58	5	II.
Natural Philosophy.....	Fourth.	65	50	I.
Natural Philosophy.....	"	56	46	II.
Physics, Mechanical.....	First.	65	20	I.
Physics, Chemical.....	First Sci.	64	10	II.
Physiology.....	Sec. and Fourth.	40	37	III.

## 3. NATURAL SCIENCES.—PROFESSOR WINCHELL.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Geology.....	Junior Scientific.	58	4	II.
Botany, Structural.....	Third "	30	32	II. half.
Systematic.....	" "	40	19	III.
Elements of Zoology.....	First.	40	23	III.
Physical Geography.....	Third "	55	55	I.
Meteorology.....	" "	38	29	I. 10 ex.
Mineralogy.....	Junior and Senior.	57	5	II. half.

## 4. ENGLISH.—PROFESSOR DONALDSON.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Hart's Composition.....	Fourth.	65	85.	I.
English Composition.....	Fourth Sp.	40	6	III.
Rhetoric.....	First { Sci. Lit.	40	7	I.
Logic.....	First.	50	17	II.
English Literature.....	Junior.	65	4	I.
	"	50	4	II.
Rhetorical Exercises, oral.....	3 Upper.	39	24	I. II. III.
"    "    written.....	"	90	24	"
"    "    rehearsals.....	"	250	24	"
Elocution.....	Second.	10	31	II.
General History, Outlines of...	Third.	40	35	III.

## 5. GERMAN—ASST. PROF. SAWYER AND OTHERS.

Subject.	Class and section.	No. Exercises.	No. Students.	Term.
Grammar (begun).....	Fourth { Sci. Lit.	65	49	I.
Grammar (cont'd).....	Fourth.	58	49	II.
Worman's Reader.....	"	0	33	III.
Lessing—Miina v. Barnhelm..	Third { Sci. Lit.	65	23	I.
Schiller—Thirty Years' War...	Third.	58	23	II.
Benedix—Comedy.....	"	40	23	III.
Grammar (begun).....	Junior, & .	65	16	I.
Grammar (advanced).....	"	58	14	II.
Schiller—Jungfrau v. Orleans.	"	40	12	III.
Goethe—Iphigenie.....	Senior, &c.	65	12	I.
Kant and Hegel.....	"	24	4	II.

## 6. FRENCH—PROFESSOR HUGGINS.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Fasquelle's Method, &c.....	Second } Sci. } Lit.	65	12	I.
Fasquelle's Method, &c.....	Second.	58	12	II.
Fasquelle's Method, &c.....	"	40	12	III.
Fenelon, Telemaque.....	First } Sci. } Lit.	58	7	II.

## 7. LATIN.—PROFESSOR WALKER.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Cesar, De Bello Gallico.....	Fourth, Cl.	140	53	I, II and III.
Cicero, Orations.....	" "	55	53	III.
" " " " " " " " " " " " " "	Third " "	65	27	I.
Virgil, Æneid.....	" "	115	27	II and III.
Livy, Historia.....	Second " "	115	17	II and III.
Horace, Odes, Satires, Epistles	First " "	140	11	I and II.
Latin Compositions.....	3 Lower.	140	11	I and II.
Roman History and Geography	First.			
" " " " " " " " " " " " " "	Second.			
Roman Literature.....	Junior.	10	4	III.
Tacitus, History.....	" "	65	4	II.
Roman Antiquities.....	" "			
Juvenal Satires.....	" "	55	4	III.
Plantus, Captives.....	Senior.	55	1	I.

## 8. GREEK—PROFESSOR BROOKS.

Subject.	Class, &c.	No. Exercises.	No. Students.	Term.
Grammar and Reader.....	Fourth, Cl.	180	10	I, II & III.
Xenophon—Anabasis.....	Third " "	130	15	I & II.
Herodotus—History.....	Third " "	50	13	III.
Homer—Iliad.....	Second " "	130	13	I & II.
Grecian Hist. and Antiquities.	" " "	10	13	III.
Essays.....	" " "	5	13	III.
Demosthenes—Phillippics.....	First " "	65	5	II.
Æschylus—Prometheus.....	" " "	53	5	III.
History and Geography.....	" " "	7	5	III.
Æschylus—Prometheus.....	" " "	65	3	I.
Greek Literature—Lectures.....	Junior.	14	3	III.
Greek Literature—Reviews.....	Junior.	14	3	III.
Aristophanes—Clouds.....	Senior.	55	1	I.
Aristophanes—Essays.....	" "	3	1	II.
Greek Literature—Lectures.....	" "	13	1	III.
Greek Literature—Reviews.....	" "	13	1	III.

9. METAPHYSICS AND COMPARATIVE PHILOLOGY.—  
PROFESSOR CAMPBELL.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Science of Language.....	Junior.	24	4	II.
History of Philosophy.....	Senior.	45	4	I.
Ontology.....	" "	30	4	I.
Ethics and Evidences.....	" "	36	4	II.
German Philosophy.....	" "	24	4	II.
Natural Theology—Lectures..	" "	12	4	III.

10. POLITICAL SCIENCE.—PROFESSOR DONALDSON AND MR. FOLWELL.

Subject.	Class.	No. Exercises.	No. Students.	Term.
Political Economy.....	Senior.	20	2	III.
History of Civilization.....	Junior.	33	4	II.
Story on the Constitution.....	First.	65	16	I.
International Law.....	Senior.	25	2	II.
American Constitution.....	"	25	2	II.

11. ENGINEERING AND INDUSTRIAL DRAWING.—PROF. RHAME.

Subject.	Class and Section.	No. Exercises.	No. Students.	Term.
Leveling and Use of Instruments.....	Junior.	30	2	I.
Topographical Drawing.....	"	35	3	I.
Mechanics.....	"	60	4	II.
"	"	60	3	II.
Triangular Surveying.....	"	40	2	III.
Henck's Field Book.....	"	45	2	III.
Farm Surveying.....	Second, Sci.	24	22	III.
Descriptive Geometry.....	First "	60	6	II.
Drawing, Plane Problems.....	Second "	65	4	I.
" Elements.....	Third "	60	39	II.
" El'm'try Projects.....	Second "	60	6	II.
" Perspective.....	First "	45	6	III.

12. MILITARY SCIENCE.—LIEUT. HUGGINS, U. S. A.

Subject.	Class.	No. Exercises.	No. Students.	Term.
Squad Drill.....	Fourth.	10	40	I.
Company Drill.....	All Male.	18	145	I.
Battalion Drill.....	"	20	145	III.
Sabre Exercise.....	First.	6	25	II.
Lectures.....	Second.		6	II.

In regard to the department of agriculture, I would respectfully refer you to remarks in the previous report, p p. 76, 77.

The lectures on military science by Professor Huggins, given in the Assembly Hall during the winter term, were listened to with interest by considerable audiences. The topics were:

1. History of the Art of War.
2. Principles of Strategy, illustrated by the Campaigns of Marengo, Waterloo, &c.
3. Grand Tactics, illustrated by the battles of Prague, Rossbach, &c.
4. Flanking Movements, illustrated by Sherman's Atlanta Campaign.

5. Influence of Railways and Telegraphs on the Art of War.

6. Influence of Improved Fire-arms on the Art of War.

Professor Hewitt visited the institution several times during the year and inspected the work of his department, but gave no lectures.

Lectures were delivered before the Literary Societies, in the course of the year, by the following gentlemen: Professors Thompson, Brooks, Peckham, Rev. D. R. Breed, and Hon. I. Donnelly.

#### COMMENCEMENT.

The second annual commencement was held on Thursday, the 18th day of June, 1874. The following persons were graduated from the College of Science, Literature and the Arts:

George Edwin Ricker, of Hennepin County, as Bachelor of Arts.

Edward Chatfield, of Fillmore County, as Bachelor of Science.

Brief addresses were delivered by the Rev. Dr. F. T. Brown, of St. Paul, the Rev. E. D. Neill, President of Macalester College, the Rt. Rev. H. B. Whipple, D. D., of Faribault, and His Excellency, the Governor. Admirable music was furnished, through the courtesy of Major General Sykes, commanding the Department, by the band of the 20th U. S. Infantry. In the afternoon the military corps, under Professor Huggins, U. S. A., was reviewed by the Governor.

#### THE COURSES OF STUDY.

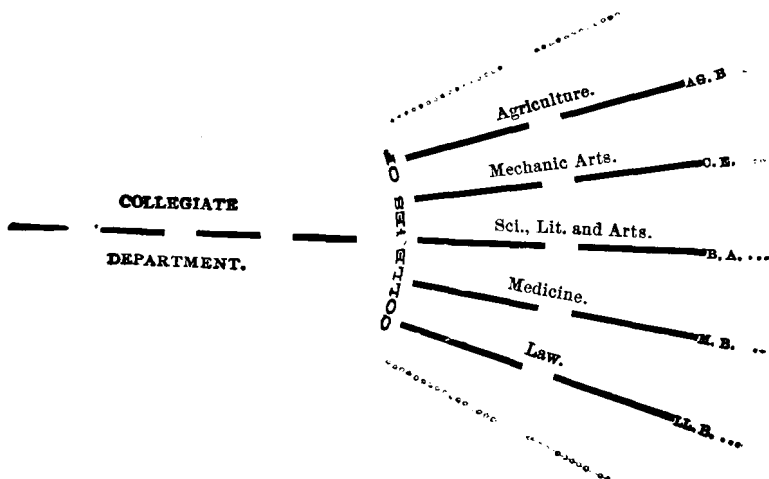
During the last two terms of the year the General Faculty, agreeably to a request of the Board of Regents, devoted a large amount of time and labor to a revision of the courses of study in the various departments. The action of the Faculty having, since the close of the year, been ratified by the Board, it is deemed advisable to lay the same before you at this time.

The objects had in view in the revision were: (1) To provide for the better organization of certain departments not represented at the time the old courses were drawn up; (2) to harmonize and liberalize the disciplinary courses; (3) to adapt all courses to the advanced growth and condition of

the institution. It is believed that the courses, as now re-adjusted, will remain essentially unchanged for a long time.

The general plan of the University remains the same as heretofore reported, the Colleges or Departments specified in the organic law retaining their respective relations.

The following diagram will illustrate these relations :



The schedules given below do not include the Colleges of Law and Medicine, which cannot yet, for want of means be organized. The departments provided for are—

1. The College of Science, Literature and the Arts ;
2. The College of Agriculture ;
3. The College of Mechanic Arts ;
4. The Department of Elementary Instruction.

The last named, otherwise designated as the COLLEGIATE DEPARTMENT, is introductory to the permanent colleges of the University. It differs from the traditional "Preparatory Department" in that it includes the work of the two lower years of the usual college course. This arrangement emphasizes and formulates the prevailing tendency of American colleges and universities to make the close of the Sophomore year a branching point for certain technical and professional courses and for the introduction of elective studies. The High Schools and other "fitting schools" of the State are thus invited to extend their work up to this branching point, and thereby to liberate the University to carry on her appropriate

work. When this shall have been generally done, the University will dispense with the department of elementary instruction as provided by law. One year's preparatory work has been dropped already, and another's has been ordered discontinued at the close of the year 1875-6.

As the Collegiate Department precedes the upper colleges in the order of time it is convenient to present its scheme of studies first. Attention is called to the following

#### GENERAL STATEMENTS.

1. The University year embraces 38 weeks exclusive of recesses, and is divided into three terms. The first term has fourteen weeks; the second and third, twelve each.

2. As a general rule each student, in whatever department, has three recitations a day for five days in the week, exclusive of rhetorical, military and other exercises.

3. The schedules are arranged according to the wants of the regular students. Special students must select from the studies as thus laid down.

4. Students of any department or college may attend classes of another department under the direction of the faculties.

5. Students in different courses are united in recitations whenever possible.

6. Elective studies, to count on standing, must be chosen from corresponding years and terms.

7. Applicants for advanced rank in any department must pass examinations in the subjects already gone over by their respective classes and sections.

8. *No honorary degrees are conferred by this University.*

9. Any person passing the required examinations will receive the appropriate degree.

10. The schedules present merely leading titles and subjects. The usual collaterals must in all cases be implied.

11. The rhetorical, military and other exercises are not specified, being held according to appointment of the Faculties from time to time.

## I.

## THE COLLEGIATE DEPARTMENT.

Applicants for admission are examined in—

Reading, Writing and Spelling ;  
 English Grammar and Analysis ;  
 Arithmetic and Elementary Algebra ;  
 Geography and United States History.

Those who intend to pursue the Latin language are also examined in the Latin Grammar and Reader.

Three Courses of Study are offered :

I. The CLASSICAL Course, in which the ancient languages are prominent.

II. The SCIENTIFIC Course, distinguished by an unbroken series of elementary natural sciences.

III. The MODERN Course, in which the modern languages are conspicuous.

The Classical and Modern Courses offer as a general rule, two languages at once ; the Scientific Course, but one, which may be English, or, if preferred, an ancient or a modern language.

No degrees are conferred in this department ; students completing a course receive a certificate which entitles them to admission to any appropriate College of the University.

This department, as the common feeder of the higher departments, is controlled and managed by the General Faculty.



## FOURTH CLASS,—(FIRST YEAR.)

	CLASSICAL COURSE.	SCIENTIFIC COURSE.	MODERN COURSE.
First Term.	1. Greek Grammar, ( <i>begun</i> .) 2. English Composit'n. 3. Caesar,— <i>Gullic War</i> .	1. Physical Geography. 2. English Composition. 3. { History of England, or Caesar,— <i>Gullic War</i> , or Greek Grammar.	1. History of England. 2. English Composition. 3. { Physical Geography, or Caesar,— <i>Gullic War</i> , or Greek Grammar.
Second Term.	1. Greek Grammar, ( <i>continued</i> .) 2. Algebra. 3. Caesar,— <i>Continued</i> .	1. Natural Philosophy. 2. Algebra. 3. { English Language, or Caesar ( <i>continued</i> ), or Greek Grammar.	1. English Language. 2. Algebra. 3. { Natural Philosophy, or Caesar ( <i>continued</i> ), or Greek Grammar.
Third Term.	1. Xenophon,— <i>Anabasis</i> . 2. General History. 3. Cicero,— <i>Oration</i> s.	1. Physiology. 2. General History. 3. { Elementary Astronomy, Cicero,— <i>Oration</i> s, or Xenophon,— <i>Anabasis</i> . Free-hand Drawing*	1. Physiology. 2. General History. 3. { Elementary Astronomy, Cicero,— <i>Oration</i> s, or Xenophon,— <i>Anabasis</i> .

\* Optional in other courses.

## THIRD CLASS,—(SECOND YEAR.)

	CLASSICAL COURSE.	SCIENTIFIC COURSE.	MODERN COURSE.
First Term.	1. Xenophon,— <i>Anabasis</i> . 2. Plane Geometry. 3. Cicero,— <i>Oration</i> s.	1. Natural Philosophy. 2. Plane Geometry. 3. { English,— <i>Readings</i> . German,—( <i>begun</i> ), or Cicero,— <i>Oration</i> s, or Xenophon,— <i>Anabasis</i> .	1. German ( <i>begun</i> ). 2. Plane Geometry. 3. { Natural Philosophy, or Cicero,— <i>Oration</i> s, or Xenophon,— <i>Anabasis</i> .
Second Term.	1. Herodotus,— <i>History</i> . 2. Geology,— <i>Elementary</i> . 3. Virgil,— <i>Eneid</i> .	1. Drawing (Geometrical)*— 2 hours. 2. Geology— <i>Elementary</i> . 3. { Modern History, German,— <i>Grammar</i> , or Virgil,— <i>Eneid</i> , or Herodotus,— <i>History</i> .	1. German,— <i>Grammar</i> . 2. Geology,— <i>Elementary</i> . 3. { Modern History, or Virgil,— <i>Eneid</i> , or Herodotus,— <i>History</i> .
Third Term.	1. Botany,— <i>Elements</i> . 2. Higher Algebra. 3. Virgil,— <i>Eneid</i> .	1. Botany,— <i>Elements</i> . 2. Higher Algebra. 3. { Modern History, or Virgil,— <i>Eneid</i> , or German,— <i>Selection</i> s.	1. German,— <i>Selection</i> s. 2. Higher Algebra. 3. { Modern History, or Virgil,— <i>Eneid</i> , or Botany,— <i>Elements</i> .

\* Required of whole class one hour as an exercise.

## SECOND CLASS,—(THIRD YEAR.)

	CLASSICAL COURSE.	SCIENTIFIC COURSE.	MODERN COURSE.
First Term.	1. Homer,— <i>Iliad</i> . 2. { Solid Geometry and Plane and Spher- ical Trigonometry. 3. Molecular Physics.	1. Molecular Physics. 2. { Solid Geometry and Plane and Spher- ical Trigonometry. 3. { English,— <i>Trench</i> , or German,— <i>Schiller</i> , or Homer,— <i>Iliad</i> .	1. German,— <i>Schiller</i> . 2. { Solid Geometry and Plane and Spherical Trigonometry. 3. { Molecular Physics, or Homer,— <i>Iliad</i> .
Second Term.	1. Homer,— <i>Iliad</i> . 2. General Chemistry. 3. Livy,— <i>History</i> .	1. Draughting (2 Hours). 2. General Chemistry. 3. { Zoology,— <i>Elements</i> , or German,— <i>Goethe</i> , or Livy,— <i>History</i> , or Homer,— <i>Iliad</i> .	1. German,— <i>Goethe</i> . 2. General Chemistry. 3. { Zoology,— <i>Elements</i> , Livy,— <i>History</i> , or Homer,— <i>Iliad</i> .
Third Term.	1. Grecian Antiquities. 2. Conic Sections and Surveying. 3. Livy,— <i>History</i> .	1. Applied Chemistry. 2. Conic Sections and Sur- veying. 3. { English,— <i>Readings</i> , or German,— <i>Selections</i> , or Livy,— <i>History</i> , or Grecian Antiquities	1. German,— <i>Prose Selections</i> . 2. Conic Sections and Sur- veying. 3. { Applied Chemistry, or Livy,— <i>History</i> , or Grecian Antiquities.

## FIRST CLASS,—(FOURTH YEAR.)

	CLASSICAL COURSE.	SCIENTIFIC COURSE.	MODERN COURSE.
First Term.	1. Horace,— <i>Odes and Satires</i> . 2. Logic. 3. { French ( <i>begun</i> ) or German do. or Analytical Chemis- try, or Military Engin'ring	1. Mechanical Physics. 2. Analytical Chemistry. 3. Logic. 4. { French ( <i>begun</i> ), or Horace,— <i>Odes</i> , &c., or Military Engineering.	1. French ( <i>begun</i> ). 2. Logic. 3. { Analytical Chemistry, or Horace,— <i>Odes</i> , &c., or Military Engineering.
Second Term.	1. Demosthenes,— <i>Phil- ippics</i> . 2. Descriptive Astrono- my. 3. Horace — <i>Satires and Epistles</i> .	1. Descriptive Geometry. 2. Descriptive Astronomy 3. { French ( <i>continued</i> ) or Horace,— <i>Epistles</i> , or Demosthenes, or Military Engineering.	1. French ( <i>continued</i> ). 2. Descriptive Astronomy. 3. { Horace — <i>Epistles</i> , or Demosthenes, or Military Engineering.
Third Term.	1. Greek,— <i>One Trage- dy</i> . 2. Rhetoric. 3. { Zoology, or French— <i>Selections</i> , or German do.	1. Descriptive Geometry and Perspective. 2. Rhetoric. 3. { Zoology, or French,— <i>Selections</i> , or Greek—A Tragedy.	1. French,— <i>Selections</i> . 2. Rhetoric. 3. { Zoology,—or Greek,—A Tragedy.

## II.

## THE COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

There are three undergraduate courses of study having the same names as those of the Collegiate Department, but offering an extended range of optional or elective studies. Each student takes at least three studies, two of which are required, the other, or others optional.

Students who complete the respective courses in a satisfactory manner are entitled to receive the following degrees :

For the classical course the degree of Bachelor of Arts ;

For the scientific course the degree of Bachelor of Sciences ;

For the modern course the degree of Bachelor of Literature.

Applicants for admission who bring a " Final Certificate " from the Collegiate Department, are admitted without further examination. Other applicants must pass examinations in all the studies of the course chosen.

This college is under the immediate control of its Special Faculty.

## JUNIOR CLASS.

	CLASSICAL COURSE.	SCIENTIFIC COURSE.	MODERN COURSE.
First Term.	1. Plato,— <i>Crito</i> , &c. 2. English Literature. 3. { Anal. Geometry and Calculus, or German, or French, or Analytical Chemistry, or Art of War.	1. Analytical Geometry and Calculus. 2. English Literature,— <i>Crit. Readings</i> . 3. { Plato,— <i>Crito</i> , &c., or German, or French, or Analytical Chemistry, or Art of War.	1. German,— <i>Schiller</i> . 2. English Literature,— <i>Crit. Readings</i> . 3. { Plato,— <i>Crito</i> , &c., or Anal. Geometry and Calculus, or French, or Analyt. Chemistry, or Art of War.
Second Term.	1. Tacitus,— <i>History</i> . 2. { Comp. Philology (2) Hist. of Civilization (3). 3. { Lithological Geology, or German (3) and English Lit. (2) or French, or Calculus ( <i>continued</i> ) or Military History.	1. Lithological Geology. 2. { Comp. Philology, (2) * Hist. of Civilization, (3) 3. { Tacitus,— <i>History</i> , or Germ. (3) & Eng. Lit. (2) or French, or Calculus ( <i>continued</i> ) or Military History.	1. { German (3),— <i>Schiller</i> . { English Literature (2) 2. { Comp. Philology (2) { Hist. of Civilization (3) 3. { Tacitus,— <i>History</i> , or Lithological Geology, or French, or Calculus, or Military History.
Third Term.	1. { Greek, Lectures on Art. Latin,— <i>Juvenal</i> . 2. Psychology. 3. { Historical Geology, or German and Eng. Lit. or French, or General Theory of Equations, &c., or Analytical Chemistry, or Military Law.	1. Historical Geology. 2. Psychology. 3. { Greek & Latin, or German and Eng. Lit. or French, or General Theory of Equations, &c., or Analytical Chemistry, or Military Law.	1. { German (3),— <i>Goethe</i> . { English Literature (2). 2. Psychology. 3. { Historical Geology, or Greek and Latin, or French, or Gen. Theory of Equations, &c., or Analyt. Chemistry, or Military Law.

\*Indicates No. exercises per week when other than five.

## SENIOR CLASS.

	CLASSICAL COURSE.	SCIENTIFIC COURSE.	MODERN COURSE.
First Term.	1. <i>Plantus,—Captives, &amp;c.</i> 2. <i>Ontology and History of Philosophy.</i> 3. { <i>Practical Astronomy, or Elements of Criticism, or French, or Scandinavian Languages, or Analytical Chemistry.</i>	1. <i>Practical Astronomy.</i> 2. <i>Ontology and History of Philosophy.</i> 3. { <i>Plantus,—Captives, &amp;c. or Elements of Criticism, or French, or Scandinavian Languages, or Analytical Chemistry.</i>	1. <i>Elements of Criticism.</i> 2. <i>Ontology and History of Philosophy.</i> 3. { <i>Plantus,—Captives, &amp;c. or Practical Astronomy, or French, or Scandinavian Languages or Analytical Chemistry.</i>
Second Term.	1. { <i>Aristotle,—Ethics. Lectures on Greek Literature.</i> 2. <i>Ethics and Evidences.</i> 3. { <i>American Constitution German, or Italian.</i>	1. <i>American Constitution.</i> 2. <i>Ethics and Evidences.</i> 3. { <i>German, or Aristotle and Greek Literature, or Italian.</i>	1. <i>American Constitution.</i> 2. <i>Ethics and Evidences.</i> 3. { <i>German, or Aristotle and Greek Literature, or Italian.</i>
Third Term.	1. <i>Political Economy.</i> 2. { <i>International Law, (2) Fine Arts, (1) Sanitary Science, (1) Natural Theology, (2) Greek, (1) Latin, (1) Modern Languages. (2)</i>	1. <i>Political Economy.</i> 2. { <i>International Law, (2) Fine Arts, (1) Sanitary Science, (1) Natural Theology, (2) Greek, (1) Latin, (1) Modern Languages. (2)</i>	1. <i>Political Economy.</i> 2. { <i>International Law, (2) Fine Arts, (1) Sanitary Science, (1) Natural Theology, (2) Greek, (1) Latin, (1) Modern Languages (2).</i>

## II.

## THE COLLEGE OF THE MECHANIC ARTS.

There are three undergraduate courses of study leading to appropriate degrees, to wit :

- (1) A course of Civil Engineering leading to the degree of Bachelor of Civil Engineering ;
- (2) A course in Mechanical Engineering leading to the degree of Bachelor of Mechanical Engineering ;
- (3) A course in Architecture leading to the degrees of Bachelor of Architecture.

The studies are partly prescribed, and partly elective ; the latter may be chosen from corresponding terms and years in other colleges.

Applicants who bring a " Final Certificate " for the Scientific Course of the Collegiate Department are admitted with-

out further examination. Other applicants must pass examination in all the studies of said course.

This College is under the immediate control of its Special Faculty.

#### JUNIOR CLASS.

	CIVIL ENGINEERING.	MECHANICAL ENGINEERING.	ARCHITECTURE.
First Term.	1. { Higher Surveying and Leveling, Topographical Draw'g. 2. Differential Calculus. 3. Elective.	1. { Machinery.—Use of Lathe &c. Mechanical Drawing. 2. Differential Calculus. 3. Elective.	1. { History of Architecture Architectural Drawing 2. Differential Calculus. 3. Elective.
Second Term.	1. { Analytical Mechanics, Shades, Shadows and Perspective. 2. Integral Calculus. 3. Lithological Geology.	1. { Analytical Mechanics. Shades, Shadows and Perspective. 2. Integral Calculus. 3. Lithological Geology.	1. { Analytical Mechanics. Shades, Shadows and Perspective. 2. Integral Calculus. 3. Elective.
Third Term.	1. Geodesy, with field practice. 2. Gen. Theory of Equations and Mod. Geometry. 3. Elective.	1. Motors,—Hydraulic, Steam, &c. 2. Gen. Theory of Equations, and Modern Geometry. 3. Elective.	1. Constructions, with Drawing. 2. Ventilation and Heating. 3. Elective.

#### SENIOR CLASS.

	CIVIL ENGINEERING.	MECHANICAL ENGINEERING.	ARCHITECTURE.
First Term.	1. Field Engineering— <i>Railway Work, with Drawing.</i> 2. Applied Mechanics— <i>(Strength and Stress of Materials.)</i> 3. Practical Astronomy.	1. Machinery, with drawing. 2. Applied Mechanics— <i>(Strength and Stress of Materials.)</i> 3. Practical Astronomy.	1. Architectural Designing— <i>with Drawing.</i> 2. Applied Mechanics— <i>(Strength and Stress of Materials.)</i> 3. Elective.
Second Term.	1. Engineering Structures— <i>(Framing, Bridges, &amp;c.)</i> 2. Stereotomy, with Drawing. 3. Elective.	1. Mechanical Constructions. 2. Stereotomy, with Drawing. 3. Elective.	1. Engineering Structures— <i>(Framing, Roofs, &amp;c.)</i> 2. Stereotomy, with Drawing. 3. Elective.
Third Term.	1. Building Materials— <i>(Woods, Stones, Bricks, Mortars and Cements)</i> 2. Analytical Mechanics. 3. Elective.	1. Building Materials— <i>(Woods, &amp;c.)</i> 2. Analytical Mechanics. 3. Elective.	1. Building Materials— <i>(Woods, &amp;c.)</i> 2. Specifications, Estimates, &c. 3. Elective.

## IV.

## THE COLLEGE OF AGRICULTURE.

There are two courses of study; (1) The regular undergraduate course, of equal rank with the courses in the other Colleges, and leading to the degree of Bachelor of Agriculture; (2) The Elementary Course, coinciding in the main with the Scientific Course of the Collegiate Department. Students who complete either of these courses are admitted to the advanced course without further examination.

Applicants for admission to the Elementary Course are examined in the following studies:

Reading, Writing and Spelling;  
 English Grammar and Analysis;  
 Arithmetic and Elementary Algebra;  
 Geography and United States History;

While the above courses of study are provided for those who desire a systematic education in Scientific Agriculture, the Board of Regents provide in their By-Laws for the admission of *any persons to any class* upon the sole condition that they appear to be competent to receive the instruction.

This College has a special building for its accommodation, containing a chemical laboratory and a plant house. There is an experimental farm of 120 acres.

This College is under the immediate control of its Special Faculty.

## 1. REGULAR COURSE.

	FIRST TERM.	SECOND TERM.	THIRD TERM.
JUNIOR CLASS.	1. Analytical Chemistry.	1 Comparative Anatomy and Physiology.	1. Stock Breeding and Veterinary Science.
	2. Farm Engineering and Architecture.	2. Agricultural Chemistry, ( <i>Analysis of Soils, etc.</i> )	2. Systematic Botany.
	3. Electives.	3. Geology, ( <i>Lithological.</i> )	3. Electives.
SENIOR CLASS.	1. Economics, ( <i>Accounts, Wages, Markets, &amp;c.</i> )	1. Jurisprudence. ( <i>Land Titles, Highways, etc.</i> )	1. Landscape Gardening and Horticulture.
	2. Arboriculture.	2. Climatology and Meteorology.	2. Special Agriculture of <i>Minerota.</i>
	3. Dairying, Poultry Culture, Fish Culture, and other specialties.	3. Electives.	3. Electives.

## 2. ELEMENTARY COURSE IN AGRICULTURE.

Class	FIRST TERM.	SECOND TERM.	THIRD TERM.
Fourth.	1. Physical Geography. 2. English Composition. 3. History of England.	1. Natural Philosophy. 2. Algebra. 3. English Language.	1. Physiology. 2. General History. 3. Element'y Astronomy.
Third.	1. Natural Philosophy. 2. Plane Geometry. 3. { English,— <i>Readings</i> , or { German, ( <i>begun</i> ).	1. Elements of Geology. 2. Mechanical Drawing, • (2 Hours). 3. { Modern History, or { German ( <i>continued</i> ).	1. Botany. 2. Higher Algebra. 3. { Modern History, or { German,— <i>Selections</i> .
Second.	1. Molecular Physics. 2. Solid Geometry and Trigonometry. 3. { English,— <i>Trench</i> , or { German,— <i>Schiller</i> .	1. General Chemistry. 2. Elements of Zoology. 3. { Drawing, { German,— <i>Goethe</i> .	1. Applied Chemistry. 2. Farm Surveying and Drainage. 3. { English,— <i>Readings</i> , { German,— <i>Selections</i> .
First.	1. Mechanical Physics. 2. Analytical Chemistry. 3. Logic. 4. { Military Engin'ring, or { French ( <i>begun</i> ).	1. Stock Breeding and Vet- erinary Science. 2. Meteorology and Clima- tology. 3. { Military Engin'ring, or { French ( <i>continued</i> ).	1. Entomology. 2. Rhetoric. 3. { Zoology, or { French,— <i>Selections</i> .

Students so preferring, are at liberty to pursue either of the ancient languages as laid down for the Classical Course in the Collegiate Department.

## THE LIBRARY.

The accessions have been mainly by donations. Senator Ramsey has furnished the documents issued by Congress and the Departments of the General Government. The Commissioners of Education and Agriculture have sent many circulars and occasional documents of value. The index of subjects is ready for publication to date. The collection of Ex-President Tappan, of Michigan University, for which negotiations have been long pending, has at length been secured. The Library, thus increased, will number about 10,000 volumes.

## PHILOSOPHICAL APPARATUS.

In anticipation of the completion of the new buildings, considerable purchases of Chemical and Physical Apparatus have been made, and a large order for importation dis-

[Foot Note.—The books numbering 2616, besides pamphlets, have been received in excellent condition.]

patched. So far as the Chemical Apparatus is concerned, the money had better have remained in the treasury, since through the delinquency of the contractor in completing the new Laboratory (the old one having been torn out), it is entirely useless. The Physical Apparatus can be put to some use, as a room in the old building can be spared for it.

#### THE COLLECTIONS.

For reasons given in the last paragraph, the Geological and Natural History collections, now of considerable magnitude, must remain stored in the basement of the old building.

#### THE CATALOGUE.

On account of the time consumed in revising the courses of study, it has been impossible to issue the regular University Calendar. Soon after Commencement an advertisement was issued to give the essential information regarding the time of opening the new year, the requisites for admission, &c.

#### THE BUILDINGS.

In the last yearly report notice was given of the completion of plans for the new Agricultural College, and the addition to the main building. On the 20th day of August, 1873, a contract was made with Mr. Michael O'Brien, of St. Paul, the lowest responsible bidder for the erection of these buildings, for the sum of \$49,000, in which contract he was bound to fully complete the buildings by the 1st day of August, 1874. At the expiration of that time neither of them was finished, and at the present writing, Dec. 5th, 1874, they are still incomplete, and, if we may judge from the past, there is little hope of their being of any use during the year now passing. Without discussing reasons for this unfortunate state of things, I must call attention to the great embarrassment it has occasioned, in order that no blame may fall, where none should fall, on the Faculty or Regents, for failure to extend and develop the work of the institution. All that can be done, until the new buildings are completed, is to carry on the routine instruction. The Library, the Museum, the Chemical laboratory, the Plant-house, the whole *special* work of the Agricultural College must stand still.



### THE GROUNDS.

Plans for the improvement and decoration of the campus have been prepared by Messrs. Cleveland & French, landscape architects, of Chicago, but it has not been deemed advisable to carry them out until the question of obtaining the much needed additions is settled.

### THE EXPERIMENTAL FARM.

Under a change of management a considerable number of valuable experiments have been carried on, the results of which will appear in the annual report of the Board of Regents. A system of general farming was carried on with fair results. Since the close of the year, Mr. C. Y. Lacy, of Avon, N. Y., has been employed to take charge of the Department of Agriculture in place of Asst. Professor D. P. Strange, whose connection closed with the year.

### GEOLOGICAL SURVEY.

Although Professor Winchell, by authority of the Board of Regents, spent a considerable portion of the summer in accompanying the expedition of General Custer to the Black Hills, he was still able to complete careful surveys of two counties, the results of which will be found in his forthcoming annual report. For a reason already stated the chemical investigations have been delayed. Other branches of the enterprise necessarily await the accumulation of funds.

### THE FACULTY.

During the year (1873-4) the following persons were employed:

WILLIAM W. FOLWELL, M. A., PRESIDENT.

GABRIEL CAMPBELL, M. A., VICE-PRESIDENT.  
*Professor of Mental and Moral Philosophy.*

VERSAL J. WALKER, M. A.,  
*Professor of the Latin Language and Literature.*

JABEZ BROOKS, M. A.,  
*Professor of the Greek Language and Literature.*

ARIS B. DONALDSON, M. A.,  
*Professor of Rhetoric and English Literature.*

EDWIN J. THOMPSON, M. A.,  
*Professor of Mathematics and Astronomy.*

ELI L. HUGGINS, U. S. A.,  
*Professor of Military Science.*

NEWTON H. WINCHELL, M. A.,  
*Professor of Geology and Mineralogy.*

HELEN SUTHERLAND, M. A.,  
*Preceptress and Assistant Professor of Latin.*

MITCHELL D. RHAME, B. A.,  
*Assistant Professor in Charge of Civil Engineering, &c.*

DALSTON P. STRANGE, B. S.,  
*Assistant Professor in Charge of Agriculture.*

WESLEY C. SAWYER, M. A.,  
*Assistant Professor in Charge of German.*

Also the following instructors for one term or less :

WILLIAM P. MELCHER, }  
JOHN G. MOORE, } *in German.*

The following Students were employed to assist the Professors of Mathematics, Latin, English and Greek : J. C. Hutchinson, G. C. Campbell, H. J. Smith, and J. F. Strange.

Mr. W. T. Scott succeeded Mr. W. E. Field in charge of the Experimental Farm, at the opening of the past season.

To the above must be added the name of—  
 Charles N. Hewitt, M.D., Secretary of the State Board of  
 Health, ex-officio Non-Resident Professor of Public  
 Health.

The following officers not having been re-elected at the  
 annual election held in April, 1874, closed their connection  
 with the institution at the end of the year :

Professor Aris B. Donaldson, M.A.  
 Assistant Professor D. P. Strange, B. S.

### STUDENTS.

The following tables show the enrollment and classifica-  
 tion of students for the year (1873-4) :

#### COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS.

Class.	Course.	Gentlemen.	Ladies.	Total.
Senior.....	Classical .....	1	0	1
	Scientific.....	1	0	1
Junior.....	Classical .....	5	0	5
	Scientific .....	8	0	3
	Literary.....	2	1	3
		12	1	13

#### COLLEGE OF THE MECHANIC ARTS.

Class.	Course.	Gentlemen.	Ladies.	Total.
Senior.....	Civil Engineering.....	2	0	2
Junior.....	Civil Engineering.....	2	0	2
		4	0	4

## COLLEGIATE DEPARTMENT.

Class.	Course.	Gentlemen.	Ladies.	Total.
First .....	{ Classical.....	5	0	5
	{ Scientific.....	11	0	11
	{ Literary.....	3	2	5
		19	2	21
Second .....	{ Classical.....	18	0	18
	{ Scientific.....	10	1	11
	{ Literary.....	1	7	8
		29	8	37
Third .....	{ Classical.....	13	0	13
	{ Scientific.....	23	5	28
	{ Literary.....	6	3	9
		42	8	50
Fourth .....	{ Classical.....	12	1	13
	{ Scientific.....	72	26	98
	{ Literary.....	7	15	22
		91	42	133
Unclassified.....		12	17	29
		193	77	270

*Summary.*

Department.	Class.	Gentlemen.	Ladies.	Total.
College of Science, Literature and Arts	{ Senior.	2	0	2
	{ Junior.	11	0	11
College of Mechanic Arts.....	{ Senior.	2	0	2
	{ Junior.	2	0	2
Collegiate Department.....	{ First.	19	2	21
	{ Second.	22	9	37
	{ Third.	42	8	50—75
	{ Fourth.	91	42	133
	{ Special.	12	17	29
Total Enrollment.....		209	78	287

COLLEGE OF LAW.

(Not organized.)

COLLEGE OF MEDICINE.

(Not organized.)

The number of enrolled Students not attending was, owing to the financial panic of last year, considerably larger than usual.

Two hundred and sixty-one were registered as residents of Minnesota; twenty-four of other states and provinces; two, unknown.

The following states and provinces were represented: Dakota, Illinois, Indiana, Iowa, Maine, Michigan, Montana, New York, Nova Scotia, Ontario, Wisconsin.

The State attendance was distributed by counties, as follows: Anoka, 1; Blue Earth, 7; Brown, 1; Dakota, 10; Dodge, 1; Douglas, 1; Fillmore, 21; Freeborn, 4; Goodhue, 4; Hennepin East, 66; Hennepin West, 62; Houston, 1; Kandiyohi, 1; Le Sueur, 4; Meeker, 4; Mille Lacs, 4; Mower, 3; Nicollet, 1; Olmsted, 3; Ramsey, 7; St. Louis, 2; Scott, 1; Stearns, 5; Steele, 4; Wabasha, 8; Waseca, 1; Washington, 10; Winona, 4; Wright, 8.

Of the 133 registered as from Hennepin East and West, 29 reside in the country, and 20 were temporary residents of the city.

Four Students died during the year, two were honorably dismissed, and forty-four were dropped from the rolls for non attendance. Sixty four Students are believed to have earned their whole support, and forty-six others some part of it.

Over one hundred have taught common schools.

The cost of living has declined somewhat. Students boarding in clubs expend for essentials about \$200.

#### ADMISSION.

The number of applicants was 90; of whom 85 were examined, 25 failed, 60 passed, and 18 were admitted with conditions. The per cents of merits for the *Elementary branches* were as follows: Reading, 76; Writing, 79; Spelling, 65; Arithmetic, 77; Elementary Algebra, 65; English Grammar, 60; Geography, 78; United States History, 66; general average, 71-7.

In consequence of the dropping of the Latin School at the close of the previous year, the proportion of applications for admission after the first term was considerably diminished.

The list of requisites for admission to the lowest class has already been given (p. 74). If the Board of Regents adhere to their resolution to discontinue the Fourth Class of

the Collegiate Department at the close of the current year (1874-5,) this list will be much extended. The following studies now embraced in this class will be added to the requisites for admission : in

*Mathematics*—Algebra ;

*Natural Sciences*—Physical Geography, Natural Philosophy, Physiology, Elements of Astronomy ;

*English Language*—English Composition, General History, History of England ;

*Latin*—Cæsar and Cicero ;

*Greek*—Grammar and Reader ; and

Free-hand Drawing.

It is proper to add there is a doubt existing among the Faculty as to the wisdom of dropping these studies at the time mentioned.\* It is feared that the schools of the country districts from which our students chiefly come cannot provide for the requisite instruction which will be thus thrown upon them. In the last annual report I took occasion to discuss at some length the relations of the University to the High Schools. Having nothing new to add I would respectfully refer you to that report. It should however be mentioned that the revision of our courses of study will occasion the Superintendents and Principals of High and Graded schools no embarrassment. They are requested to note that the requisites for admission to the Fourth class remain unchanged, and that but few alterations have been made in the schemes for the lower classes. Boards and Principals disposed to arrange their courses of study with reference to the University may be guided by this general principle, viz. : High School courses should embrace the studies of the Collegiate Department of the University beginning with those of the lowest (Fourth) class and extending upward as far as may from time to time be possible. *The University will begin wherever they leave off*, but it is earnestly to be desired that the High Schools should push their work so as to cover the whole scope of the Collegiate Department. It will take time and effort to do this, but it can be done, if any where, in Minnesota. When this consummation shall have been reached our State will present a *system* of schools complete and harmonious. It is still my conviction that legislation will be needed in order to combine the existing elements into a State system.

All of which is respectfully submitted.

\* By a resolution of the Board, passed December 29th, 1874, the discontinuance of the Fourth class has been postponed to the close of the year 1875-6.