

REPORT OF THE UNIVERSITY OF MINNESOTA FOR
THE UNIVERSITY YEARS 1882-83 AND 1883-84.

THE UNIVERSITY OF MINNESOTA,
MINNEAPOLIS, Minn., July 1, 1884.

To the Honorable David L. Kiehle, Superintendent of Public Instruction for the State of Minnesota,

SIR: I have the honor, in accordance with law to transmit a report of the condition and progress of the university for the biennial period ending June 30, 1884, including the university years 1882-83 and 1883-84.

I am, Sir, very respectfully,
Your obedient servant,

WILLIAM W. FOLWELL,
President.

REPORT
OF THE
UNIVERSITY OF MINNESOTA.

THE BOARD OF REGENTS.

The Board of Regents is composed at this date of the following gentlemen:

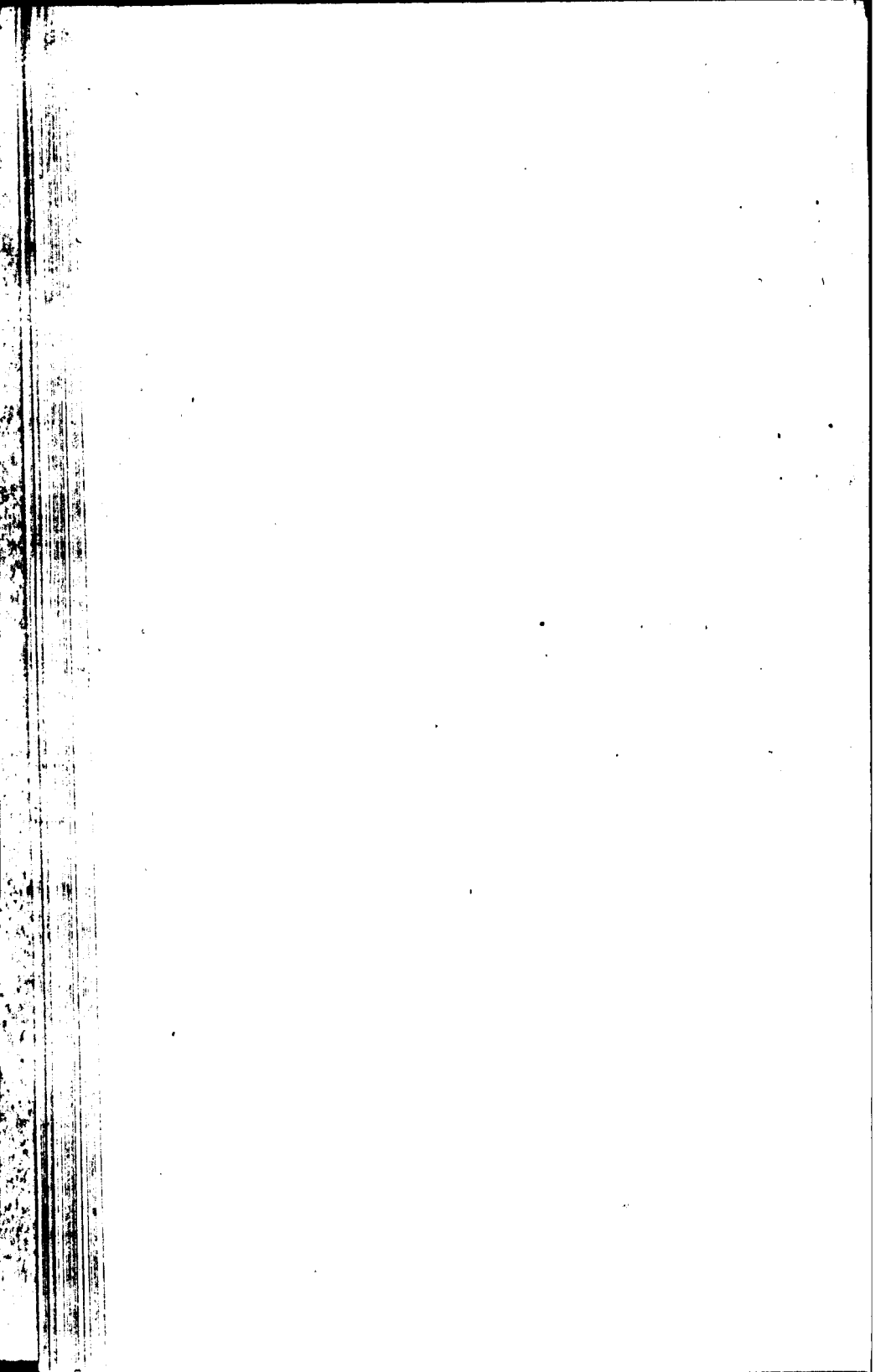
The Hon. HENRY H. SIBLEY, St. Paul; term expires in.....	1886
The Hon. THOS. S. BUCKHAM, M. A., Faribault; term expires in.....	1885
The Hon. GREENLEAF CLARK, M. A., St. Paul; term expires in.....	1886
The Hon. CUSHMAN K. DAVIS, M. A., St. Paul; term expires in.....	1886
The Hon. JOHN B. GILFILLAN, Minneapolis; term expires in.....	1886
The Hon. KNUTE NELSON, Alexandria; term expires in.....	1887
The Hon. JOHN S. PILLSBURY, Minneapolis; term expires in.....	1887

AND EX-OFFICIO.

The Hon. LUCIUS F. HUBBARD, St. Paul,	The Governor of the State.
The Hon. DAVID L. KIEHLE, M. A., St. Paul,	The State Superintendent of Public Instruction.
WILLIAM W. FOLWELL, LL.D., Minneapolis,	The President of the University.

OFFICERS OF THE BOARD.

The Hon. HENRY H. SIBLEY, St. Paul, President.
The Hon. J. B. GILFILLAN, Minneapolis, Recording Secretary.
WILLIAM W. FOLWELL, Minneapolis, Corresponding Secretary.
C. A. DAVISON, Minneapolis, Treasurer.



THE STATE NORMAL BOARD.

THOMAS SIMPSON, Winona.....	1885.
JOHN C. WHITNEY, Minneapolis.....	1887.
GEORGE T. BARR, Mankato.....	1885.
SANFORD NILES, Rochester.....	1885.
WILLIAM B. MITCHELL, St. Cloud.....	1885.
HENRY B. WILSON, Red Wing.....	1887.
DAVID L. KIEHLE, Minneapolis.....	1885.
Ex Officio—The State Superintendent of Public Instruction.	

OFFICERS:

HENRY B. WILSON.....	President.
DAVID L. KIEHLE.....	Secretary.
THOMAS SIMPSON.....	Treasurer at Winona.
GEORGE T. BARR.....	Treasurer at Mankato.
WILLIAM B. MITCHELL.....	Treasurer at St. Cloud.

EXECUTIVE COMMITTEE.

The Hon. JOHN S. PILLSBURY, Minneapolis.
The Hon. JOHN B. GILFILLAN, Minneapolis.
The Hon. GREENLEAF CLARK, St. Paul.

MEETINGS.

The annual meeting is fixed by the charter for the second Tuesday in December. There is a meeting on commencement day; other meetings occur as called by the president of the board.

The executive committee meet regularly on one of the last secular days of each month.

The only change in the personnel of the board since the last report is in the retirement of Regent Tousley, by reason of expiration of term, and the appointment of the Hon. Cushman K. Davis, M. A., to fill the vacancy. Regents Clark, Gilfillan, Nelson, Pillsbury, Sibley and Buckham have been reappointed for the usual term of three years.

THE GENERAL FACULTY.

This body is composed of all the professors and assistant professors. Instructors have the right to attend the meetings and participate in discussions, but not to vote. The president of the University presides, having only the casting vote. The general faculty has the oversight and conduct of all matters of general importance, and of the collegiate department. The special faculties manage the concerns of the different colleges of the University.

The membership of the general faculty at the present time, is as follows:

WILLIAM W. FOLWELL, LL. D., PRESIDENT,
Instructor in Political Science.

JABEZ BROOKS, D. D.,
Professor of Greek, and in charge of Latin.

NEWTON H. WINCHELL, M. A., PROF. GEOL. AND MIN.,
State Geologist.

CHARLES N. HEWITT, M. D.,
Professor of Preventive Medicine.

JOHN G. MOORE, B. A.,
Professor of German.

CHRISTOPHER W. HALL, M. A.,
Professor of Geology, Mineralogy and Biology.

JOHN C. HUTCHINSON, B. A.,
Assistant Professor of Greek and Mathematics.

JOHN S. CLARK, B. A.,
Assistant Professor of Latin.

MATHILDA J. WILKIN, B. L.,
Instructor in English and German.

MARIA L. SANFORD,
Professor of Rhetoric and Elocution.

WILLIAM A. PIKE, C. E.,
Professor of Engineering, and in charge of Physics.

JOHN F. DOWNEY, M. A., C. E.,
Professor of Mathematics and Astronomy.

JAMES A. DODGE, PH. D.,
Professor of Chemistry.

CHARLES W. BENTON, B. A.,
Professor of French.

PUBLIC INSTRUCTION.

EDWARD D. PORTER, M. A.,
Professor of Agriculture.

WILBUR F. DECKER, B. M. E.,
Instructor in Shop Work, Drawing and Physics.

HENRY M. WAITT, B. S.,
Instructor in Engineering.

FRANKLIN STAPLES, M. D.,
Professor of the Practice of Medicine.

DANIEL W. HAND, M. D.,
Professor of Surgery.

WILLIAM H. LEONARD, M. D.,
Professor of Obstetrics and Diseases of Women and Children.

PERRY H. MILLARD, M. D.,
Professor of Anatomy and Physiology.

CLARENCE L. HERRICK, B. S.,
Instructor in Zoology.

THOMAS PEBBLES, B. A.,
Instructor in Mental and Moral Philosophy and History.

O. J. BREDÁ, PH. D.,
Professor of Scandinavian Languages.

GEORGE EDWIN MACLEAN, PH. D.,
Professor of English.

CHARLES E. SMITH, M. D.,
Professor of Materia Medica and Therapeutics.

GEORGE W. WOOD, M. D.,
Professor of Diseases of the Nervous System and of Medical Jurisprudence.

CHARLES SIMPSON, M. D.,
Professor of Pathology.

On the eleventh day of July, 1883, Professor Moses Marston, Ph. D., died from the effects of an accidental injury to one of his hands, received shortly before. The general faculty subsequently adopted resolutions expressive of their deep sense of the loss to themselves and to the University and of sympathy with the family.

Prof. Winchell has been exclusively occupied with his duties as state geologist.

Prof. Hewitt's title has been changed from that of professor of public health and hygiene to that of professor of preventive medicine.

Capt. Edgar C. Brown, U. S. A., professor of military science, resigned his office at the close of a second term, in March, 1883.

Instructor William A. Noyce, Ph. D., of John Hopkins University, assistant in the chemical laboratory, resigned in June, 1883, to accept the position of professor of chemistry in the East Tennessee University, at Knoxville. Mr. Charles F. Aldener, B. S., of this university, was appointed to succeed him.

Prof. William H. Brewer, of Yale College, Mr. L. B. Arnold, President of the American Dairymen's Association, and Prof. E. A. A. Grange were borne on the roll of the faculty in the calendar for 1882-83 as lecturers in the farmer's course, the first named on stock breeding, the second on dairying and husbandry, and the last on domestic animals.

In the calendar for the same year first appeared the names of the following professors in the college of Medicine, which had been organized by the Board of Regents January 5, 1883:

Dr. Franklin Staples, of Winona, Professor of the Practice of Medicine.

Dr. Daniel W. Hand, of St. Paul, Professor of Surgery.

Dr. William H. Leonard, of Minneapolis, Professor of the Diseases of Women and Children.

Dr. Perry H. Millard, of Stillwater, Professor of Anatomy and Physiology.

Professor John S. Clarke, B. A. of this University, assistant Professor of Latin, in June, 1883, obtained a leave of absence for two years for the study of his specialty in foreign universities, and for the past year has been pursuing his studies in the University of Leipzig, Germany.

Professor William H. Leib, instructor in music, was com-

pelled by ill health to relinquish his instruction in December 1883, since which time no work has been done in that department.

Mr. Clarence L. Herrick, B. S. of this University, was employed to give the instruction in zoology in both of the years covered by this report, a duty which he performed to the entire satisfaction of the professor in charge. Since his return from abroad, Mr. Herrick has been employed on the geological survey when not giving instruction.

At the close of the year 1882-83, Professor Alexander T. Ormond resigned the professorship of mental and moral philosophy and history, to accept a similar position, at a largely increased salary, in the college of New Jersey, at Princeton, N. J. At the beginning of the new year, in September, 1883, Mr. Thomas Peebles, a late graduate of Princeton, was employed as instructor in the same department, and has given the instruction during the past year in a very satisfactory manner.

In conformity with an act passed by the legislature of 1883, requiring the appointment of a professor of the scandinavian languages, the executive committee, in October, 1883, in behalf of the board of regents, selected the Rev. O. J. Breda, Ph. D., as such officer. Professor Breda at the time was absent on a visit to his native country, Norway, and obtained, by correspondence, leave to remain absent for the remainder of the year.

In March, 1884, the Rev. George Edwin MacLean, Ph. D., was employed to give the instruction in the department of English language and literature, the duties of which, since the death of Professor Marston, had been performed by Professor Sanford and her assistants.

Miss Juliet Corson, of New York, delivered, in January, 1884, two exceedingly interesting courses of lectures upon domestic economy in the farmers' lecture course.

In the calendar for 1883-84 first appeared the names of the following professors, added in April, 1884, to the faculty of the college of medicine:

DR. CHARLES E. SMITH, of St. Paul,
Professor of Materia Medica and Therapeutics.

DR. GEORGE W. WOOD, of Faribault,
Professor of Diseases of the Nervous System and of Medical Jurisprudence.

DR. CHARLES SIMPSON, of Minneapolis,
Professor of Pathology.

Miss Charlotte A. Rollit, B. L. of this University, who, since her graduation, had performed the duties of assistant librarian, was absent on leave during the past year, the duties in the mean time being performed, in a very satisfactory way, by Miss Lettie M. Crafts, B. L. of this University.

During the past year Miss Emma F. Trussell, B. L. of this University, has performed the duties of registrar and rendered assistance in the departments of Rhetoric and English.

On May 20, 1884, Mr. James Bowen, who for some years had been superintendent of the plant house, died suddenly after a short illness. The vacancy thus occasioned has been occupied by Mr. Edwin A. Cuzner.

On the 21th of February, 1883, Col. Wm. W. Folwell, who had been president of the University from 1869, resigned his office, to take effect at the close of the year then passing. On the 8th of March following the resignation was accepted, to take effect when his successor should be elected and qualified. It was the expectation of the board of regents to fill this vacancy before the beginning of the new year 1883-84. This expectation not having been met, Col. Folwell has continued to discharge the duties until the present time. He will be relieved at the beginning of the new year, 1884-85, by Professor Cyrus Northrup, for many years a member of the faculty of Yale College. Immediately upon the acceptance of his resignation as president, the board of regents elected Col. Folwell to the professorship of political science.

INSTRUCTION.

The actual work performed by faculty and students is exhibited, in usual, by means of tables, which from year to year have appeared in these reports. It should be borne in mind that such tables exhibit only the public duties performed—they can not show the great additional amount of private work in preparation for them.

See Appendix to this report for the tables thus referred to.

ADDITIONAL INSTRUCTION.

Attention is directed to the following work of members of the faculty not exhibited in the foregoing tables:

I. THE EVENING DRAWING SCHOOL.

This school was opened by Professor Pike, in 1880. The course includes twenty-five free lessons in mechanical drawing, varied to suit the wants of different classes of young artisans. The number of attendants in 1882-83 was fifty-one, in 1883-84 forty-six. This school is under the direction of Professor Pike, but the instruction has been chiefly given by instructors Waitt and Decker.

II. THE SUMMER SCHOOL OF SCIENCE AND LETTERS.

Reference is respectfully made to your last report, page 53, for an account of the opening of this school and its work in the years 1881 and 1882. This school was reopened in the summer of 1883, according to the following announcement:

THE UNIVERSITY OF MINNESOTA.

SUMMER SCHOOL FOR TEACHERS, 1883.

The following Courses of Instruction for Teachers and others will be opened at the University of Minnesota on July 10th, to continue four weeks.

I. Zoology—Mr. C. L. Herrick.

a. Lectures on animal morphology, or the various forms of structure exhibited by the prominent subdivisions of the animal kingdom.

6. Laboratory study of types of animal forms illustrating this structure, and the physiological functions and development of the same.
7. Cells as organic units — their growth and modification.
8. Distribution of labor in the animal body — organs.
9. Grouping of organs — systems.
10. The animal body as a motor — organs of swimming, creeping, walking,

11. The animal body as a chemical and physical laboratory — organs of nutrition, respiration, circulation.

12. The animal body as a tool of the mind — organs of sense and the nervous system.

Illustrations, preparations and specimens will be freely used. The laboratory is equipped with compound microscopes and modern appliances. Some instruction in taxidermy and dissection may be offered.

II. Chemistry — Professor J. A. Dodge.

1. In the forenoon, daily, general chemistry, with experiments performed by the students taking this part of the subject, and by Prof. Dodge.
 2. In the afternoon, daily, analytical chemistry, qualitative and quantitative.
- Other part, or both parts, of the above may be taken.

III. French — Professor C. W. Benton.

The course will be adapted to the needs of those in attendance. For beginners, a small book, Chardenal's First French Course, will be used. For advanced students a special class can be formed, in which the work will be conducted in the French language.

IV. English — Professor M. Marston.

The course will occupy four hours per week, and consist of lectures on the history, philology and grammar of the English language, with illustrative examples and exercises. The design will be to put the student in the way of mastering the facts which afford the correct data for explaining the grammatical forms and idioms of the English language.

The equipment for carrying on the work of this summer school will be ample. The laboratories, the museums, the library and the conservatory of the University will be brought into constant use.

The only charge for attendance will be a laboratory fee of \$1 per week. The lectures are wholly free, and any one or all of the courses may be attended. A board can be obtained in the vicinity of the University for from \$1 to \$2 per week.

Although the courses are undertaken principally to offer the teachers of Minnesota the advantages of the State University and its equipment, all others who love study well enough to come and work with us will be heartily welcomed and helped.

Lectures and laboratory work will begin Tuesday, July 10th, at 9 A. M., and close Saturday, August 4th.

For further information or aid in securing board, address either of the professors named in this circular, at Minneapolis.

MINNEAPOLIS, April 20, 1883.

The sudden death of Prof. Marston deprived the attendants of the expected instruction in English. The place of this was supplied partly by a few lessons in rhetoric by Prof. Sanford, but chiefly by an admirable course in didactics by Prof. William H. Payne, of the University of Michigan, whose services were secured by the intervention of the department of public instruction. The number of attendants was 105, a considerable increase on that of previous years.

III. THE FARMERS' LECTURE COURSE.

1883.

This course was continued in the winter of 1883, and, in spite of severe weather and other adverse circumstances, was a great success. The number of persons attending, exclusive of those belonging to other departments of the University, was 281.

The following courses of instruction were given:

Six lectures on the principles of breeding domestic animals, by Prof. Wm. H. Brewer of Yale College

Six lectures on American dairy husbandry and management by Prof. L. B. Arnold, president of the American Dairymen's Association.

Six lectures on the diseases of domestic animals and their treatment, by Prof. E. A. A. Grange, of the Ontario Agricultural College, Guelph, Canada.

Three lectures by Prof. Henry A. Webber, of the Illinois Industrial University, on the manufacture of sugar, syrup and glucose from sorghum.

Three lectures by Dr. Chas. N. Hewitt, professor of preventive medicine in the University and secretary of the state board of health, on the hygiene of farmer's homes.

Single lectures were delivered by the Hon. C. P. Bulter of

Topeka, Kansas, forestry expert of the U. S. department of agriculture; the Hon. N. J. Coleman, of St. Louis; the Hon. J. J. Woodman, of Michigan; Prof. E. D. Porter, of the university, and others.

By an arrangement with the managers of those societies, the winter meetings of the State Agricultural Society, the State Horticultural Society, the State Amber Cane Association, the Dairymen's Association and the Wood Growers Association, were held at the Agricultural College of the University, during the term of the Farmers' Course. A full account with the substance of the lectures and discussions will be found in the report of the board of regents, contemporaneous with this.

- 1884.

In 1884, after failing to secure the services of some distinguished experts, the professor in charge determined to advise that the work for the year in this department be concentrated upon a single specialty, and that one which should be interesting and valuable to farmers' wives and daughters, who are entitled to the benefits of the national endowment quite as much as the farmers themselves and their sons. This recommendation having been agreed to, the services of Miss Juliet Corson, the distinguished lecturer upon domestic economy, were secured. Miss Corson, beginning January 28, 1884, gave two courses of lectures, twelve in all; six morning lectures, forming the so-called housekeepers' course, were devoted to advanced topics; six afternoon lectures, forming the university course, were devoted to practical illustrations of the elementary principles of household management and cookery. The chemistry of food and physiology of nutrition were also discussed. At the first lecture the agricultural class room was found insufficient to seat the attendants, and an adjournment was taken to one of the society rooms; this proving too small, the remaining lectures were given in the large chapel of the main building. The number of attendants enrolled was 1,118, and many other persons, whose names were not obtained, attended one or more of the lectures. The lectures were reported stenographically, in expectation of being printed in the report of the board of regents. In the second biennial report of the board (1881-82) will be found reports of the lectures and discussion, of the farmers' lecture course in January, 1882. The next report following that will contain the reports of the evening courses.

ATTENDANCE.

THE FOLLOWING TABLES EXHIBIT THE ENROLLMENT AND CLASSIFICATION OF THE STUDENTS.

SUMMARY, 1882-83.

COLLEGE OR DEPARTMENT.	CLASS.	Gentlemen.	Ladies.	Total.
Science, Literature and Arts.....	(Senior.....)	13	10	23
	(Junior.....)	13	6	19—1
Mechanic Arts.....	(Senior.....)	3	.....	3
	(Junior.....)	2	.....	2
	(Specials.....)	20	.....	20—25
Agriculture.....	(Specials.....)	70	.....	10—10
	(.....)
Collegiate Department.....	I.....	21	9	30
	II.....	16	11	27
	III.....	35	18	53
	(Specials.....)	24	22	46—156
Deduct, twice counted.....	(.....)	157	76	233
	(.....)	10	.....	10
Total.....	(.....)	147	76	223

BY CLASSES ONLY.

Seniors of all departments.....	26
Juniors of all departments.....	21
Sophomores—Collegiate Department.....	39
Freshmen—Collegiate Department.....	27
Sub-Freshmen—Collegiate Department.....	53
Specials of all departments.....	76
Total (less 10 specials twice counted).....	223
Candidates for masters' degrees.....	9
Attending Summer School of Science and Letters.....	73
Attending Evening Drawing School.....	51
Attending Farmers' Lecture Course.....	281
Grand total.....	637

The distribution of students in the various departments, classes and courses is shown as follows:

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior.....	(Classical.....)	6	2	8
	(Scientific.....)	7	2	9
	(Modern.....)	.....	6	6
Totals.....	(.....)	13	10	23
Junior.....	(Classical.....)	6	2	8
	(Scientific.....)	6	2	8
	(Modern.....)	1	2	3
Totals.....	(.....)	13	6	19

COLLEGE OF MECHANIC ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
.....	{ Civ. Eng.....	2	.....	2
	{ Mech. Eng.....	1	.....	1
Total.....		3	.....	3
.....	Civ. Eng.....	2	.....	2
.....	{ Civ. Eng.....	7	.....	7
	{ Mech. Eng.....	2	.....	2
	{ Shop Work.....	6	.....	6
	{ Drawing.....	5	.....	5
Total.....		20	.....	20

COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
.....	{ Classical.....	5	1	6
	{ Scientific.....	13	2	15
	{ Modern.....	3	6	9
Total.....		21	9	30-30
.....	{ Classical.....	8	1	9
	{ Scientific.....	7	3	10
	{ Modern.....	1	7	8
Total.....		16	11	27-27
.....	{ Classical.....	4	3	7
	{ Scientific.....	29	4	33
	{ Modern.....	2	11	13
Total.....		35	18	53-53
.....		21	22	46-46
Total.....				156

One hundred eighty-nine students were enrolled as residents of Minnesota, the following counties being represented:

Anoka, 1; Blue Earth, 5; Carver, 2; Chippewa, 1; Clay, 1; Cass, 6; Dodge, 2; Faribault, 2; Fillmore, 4; Freeborn, 2; Goodhue, 11; Hennepin East, 41; Hennepin West, 59; Le Sueur,

PUBLIC INSTRUCTION.

4; Lincoln, 1; Lyon, 1; Martin, 1; Mecker, 2; Mower, 4; Nicollet, 3; Olmsted, 6; Ramsey, 9; Rice, 3; Rock, 1; Stearns, 4; Steele, 4; Stevens, 1; Wabasha, 4; Wright, 4.

Thirty-four were registered from other states and countries, to-wit: Canada, 1; Dakota Territory, 8; Florida, 1; Illinois, 6; Indiana, 1; Iowa, 5; Massachusetts, 3; Michigan, 2; Montana Territory, 2; New York, 2; Ohio, 2; Vermont, 1.

SUMMARY, 1883-84.

COLLEGE OR DEPARTMENT.	CLASS.	Gentlemen.	Ladies.	Totals.
Science, Literature and Art.....	{ Senior	14	7	21
	{ Junior.....	7	6	13-34
	{ Junior.....	3		3
	{ Special.....	4		4
Mechanic Arts.....	Art. Tr. Sch... {	A.....		1-8
		B.....		4
		C.....		4
		D.....		4
Medicine.....	Candidates for M. B.	47		8
Agriculture.....	Special.....	2		47-63
Collegiate Department.....	I.....	1		2-2
	II.....	17		1-1
	III.....	19	10	27
	Specials.....	38	10	29
		36	21	59
Deduct, twice counted.....			21	37-172
		205	75	280
Total.....		1		1
		204	75	279

BY CLASSES ONLY.

Seniors of all departments.....	24
Juniors of all departments.....	17
Sophomores—Collegiate Department.....	14
Freshmen—Collegiate Department.....	27
Sub-Freshmen—Collegiate Department.....	29
Specials of all departments.....	59
Artisans Training School.....	58
Candidates for degree B. M.....	63
Total.....	2
Candidates for masters' degrees.....	279
Attending Summer School of Science.....	10
Farmers' Lecture Course.....	105
	1, 118

The distribution of students in the various departments, classes and courses was as follows:

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
.....	{ Classical.....	7	2	9
	{ Scientific.....	7	5	12
	{ Modern.....		8	8
Total.....		14	7	21
.....	{ Classical.....	2	1	3
	{ Scientific.....	8	1	9
	{ Modern.....	2	4	6
Total.....		7	6	13

COLLEGE OF MECHANIC ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
.....	Civ. Eng.	3		3
.....	{ Civ. Eng.	2		2
	{ Mech. Eng.	1		1
	{ Arch.	1		1
Total.....		4		4
.....	Mech. Eng.	1		1
..... Training School.....	{ Division A	4		4
	{ Division B	1		1
	{ Division C	1		1
	{ Division D	17		17
Total.....		63		63

COLLEGE OF MEDICINE.

	Gentlemen.	Total.
..... B. M.	2	2

COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Sophomore.....	{ Classical.....	6	1	7
	{ Scientific.....	9	3	12
	{ Modern.....	2	6	8
Total.....		17	10	27—27
Freshman.....	{ Classical.....	8	3	11
	{ Scientific.....	8	2	10
	{ Modern.....	3	5	8
Total.....		19	10	29—29
Sub-Freshman.....	{ Classical.....	6		6
	{ Scientific.....	29	2	31
	{ Modern.....	3	19	22
Total.....		38	21	59—59
Specials.....		36	21	57—57
Grand Total.....				172

Two hundred and forty-five (245) were enrolled as residents of Minnesota, the following counties being represented:

Anoka, 3; Blue Earth, 1; Brown, 1; Carver, 3; Chippewa, 1; Clay, 1; Dakota, 6; Dodge, 6; Faribault, 2; Fillmore, 7; Goodhue, 16; Hennepin (E), 62; Hennepin (W), 71; Jackson, 1; Le Sueur, 2; Lyon, 5; McLeod, 1; Martin, 2; Meeker, 2; Mower, 6; Nicollet, 4; Olmsted, 6; Ramsey, 7; Rice, 3; Rock, 1; Scott, 2; Stearns, 3; Steele, 3; Stevens, 1; Wabasha, 6; Washington, 3; Winona, 1; Wright, 6.

Thirty-four students were enrolled from other states and countries, as follows:

Canada, 2; Dakota Territory, 4; Florida, 1; Illinois, 3; Indiana, 2; Iowa, 5; Massachusetts, 1; Maine, 4; Michigan, 3; New York, 2; Ohio, 2; Pennsylvania, 1; Vermont, 1; Wisconsin, 3—fourteen states and countries.

ADMISSIONS.

The examinations of the High School Board having been resumed, it was not thought necessary for the faculty to hold any "local examinations" in the summer of 1882. Although 1,039 certificates of the high school board had been granted in the previous year, but three were presented at the University.

The number of applicants for admission in 1882-83 was much greater than in either of the two previous years, but the results of the examinations were not very encouraging. The record for the year 1882-83 is as follows:

RECORD FOR 1882-83.

	Whole No.	Gentlemen.	Ladies.
Examined.....	87	46	41
Rejected.....	24	10	14
Admitted.....	63	36	27
Placed to regular courses.....	19	14	5
Placed to special studies.....	10	6	4
On probation to regular courses.....	24	12	9
On probation to special courses.....	13	4	9

The distribution of applicants admitted to the different courses of study is as follows:

	Whole No.	Gentlemen.	Ladies.
To the classical course.....	6	2	4
To the scientific course.....	26	24	2
To the modern course.....	8	0	8
To selected studies.....	23	10	13
Total.....	63	36	27

Five gentlemen and one lady of mature age, were admitted to take selected studies without examinations, and fifteen or more young men were admitted to shop work, without taking examinations.

RECORD FOR 1883-84.

	Whole No.	Gentlemen.	Ladies.
Examined.....	104	61	43
Rejected.....	17	8	9
Admitted.....	87	53	34
Placed to regular courses.....	7	4	3
Placed to special courses.....	5	3	2
On probation to regular courses.....	58	38	20
On probation to special studies.....	17	8	9

The distribution to the courses of study was as follows:

	Whole No.	Gentlemen,	Ladies.
To the classical course.....	8	7	1
To the scientific course.....	33	30	3
To the modern course	24	5	19
To selected studies.....	22	11	11
Total.....	87	53	34

One lady and one gentleman of mature age were admitted without examinations, to pursue selected studies. No examinations were required of students in divisions C and D of the Artisans Training School, 56 in number.

The number of certificates granted by the High School Board in the year ending in 1883 was 2,483. There were presented at the University by applicants 166 certificates, as follows: arithmetic, 5; elementary algebra, 12; english grammar, 7; geography, 5; U. S. history, 7; Latin grammar, 6; natural philosophy, 12; physical geography, 7; elementary astronomy, 12; general history, 10; plane geometry, 14; physiology, 13; Caesar, 11; elementary chemistry, 12; botany, 4; ancient history, 3; elementary algebra, 7; solid geometry, 5; Cicero, 7; Virgil, 6; Greek grammar, 1.

The different towns were represented as follows:

Anoka, 11; Austin, 8; Faribault, 13; Hastings, 9; Kasson, 8; Lake City, 22; Minneapolis (Academy), 27; Monticello, 12; Red Wing, 23; Rochester, 4; St. Peter, 4; Shakopee, 3; Spring Valley, 1; Stillwater, 1; Zumbrota, 20.

These figures indicate a good ground for hoping that at no distant day the high schools of the state may form a broad and direct avenue from the common schools to the University. It is not merely important, however, that they be so, but that they be known to be so. The people of the State, and all the youth in particular, need to understand that the regular path to the University is through the public high schools of the state.

GRADUATIONS.

At the eleventh annual commencement, held May 31, 1883, the following twenty-five degrees were conferred:

1883.

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

For Bachelor of Arts.

Edward Payson Baldwin.....	Tower City, D. T.
William Eastman Fay.....	Cambridge, Mass.
Edson Starr Gaylord.....	Minneapolis
David Percy Jones.....	Minneapolis
Joseph Henry Locke.....	St. Cloud.
Helen Louise Pierce.....	Minneapolis.
Martha Alma Sheldon.....	Excelsior.
Sumner Lincoln Trussell.....	Champlin.

For Bachelor of Science.

Robert Mowry Bell.....	Minneapolis.
Frederic Henry Clark.....	Boston, Mass.
Louise Elma Hollister.....	Marshfield.
Edward Corydon Jones.....	Minneapolis.
George Nelson Salisbury.....	Farbault.
Charles Frederic Sidener.....	Red Wing.
Emma Jane Ware.....	Browndale.

For Bachelor of Literature.

Samuel Doak Catherwood.....	Austin.
Annie Harriet Jefferson.....	Minneapolis.
Kate Louise Kennedy.....	Minneapolis
Sarah Pierrepont McNair.....	Minneapolis.
Anna Calista Marston.....	Minneapolis.
Janet Nunn.....	Dodge Center.
Emma Frances Trussell.....	Champlin.

COLLEGE OF MECHANIC ARTS.

For Bachelor of Civil Engineering.

William George Peters.....	Minneapolis.
THESES: Minnehaha Bridge.	
Louis Orville Smith.....	La Suour.
THESES: Minneapolis Water Works.	

For Bachelor of Mechanical Engineering.

John Henry Barr.....	Mankato.
THESES: Design for an Automatic Cut-off Steam Engine.	

A certificate in Civil Engineering was awarded to
Alexander Martin Holcomb.....Minneapolis.
THESIS: Iron Railway Bridge in Minneapolis.

The graduations, 26 in number, at the twelfth annual commencement, held May 29, 1884, were as follows:

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

For Bachelor of Arts—9.

Elmer Ellsworth Adams.....	Morrisville, Vt.
Patrick Joseph Butler.....	Minneapolis.
Oscar Pirkins.....	Minneapolis.
Joseph Henry Capper Hutchinson.....	Hastings.
Anthony Johnson.....	Newburg.
Eli Larson.....	Bratsburg.
Hannah Robie Sewall.....	St. Paul.
Susan Winifred Sewall.....	St. Paul.
Zenas Newton Vaughn.....	Austin.

For Bachelor of Science—9.

Nathan Morton Baker, Jr.....	St. Peter.
Jeremiah Ignatius Donohue.....	Pilot Mound.
George Lorenzo Hendrickson.....	St. Paul.
George Horace Klepper.....	Albert Lea.
Bessie Laythe.....	Chatfield.
James Eugene Manchester.....	Blooming Prairie.
Henry Hastings Sibley Rowell.....	Minneapolis.
Charles Christian Schmidt.....	Sleepy Eye.
Emma Zwinggi.....	St. Peter.

For Bachelor of Literature—3.

Anna Helen Bonfoy.....	Minneapolis.
Belle Marion Bradford.....	Empire.
Adalyn Kingsbury.....	Cassopolis, Mich.

COLLEGE OF MECHANIC ARTS.

For Bachelor of Civil Engineering—3.

William Ricketson Hoag.....	Rochester.
George John Loy.....	Chaska.
Irving Webber Matthews.....	Luverne.

COLLEGE OF MEDICINE.

For Bachelor of Medicine—2.

James Kidd Simpson.....Virden, Manitoba,
Hugo Speter.....Belle Plaine,

The following table shows the number and kind of degrees which have been conferred by this University:

	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	Total.
B. A.....	2	1	3	3	9	5	8	4	10	11	8	9	73
B. S.....		1	2	5	3	8	10	9	10	9	7	9	73
B. L.....			1		4	1	6	4	7	11	7	8	44
B. C. E.....			3	3			2				2	8	13
B. M. E.....						1					1		2
B. Arch.....					1								1
B. Ag.....										1			1
M. A.....							1	1					2
M. S.....										1			1
B. M.....												2	2
Totals.....	2	2	9	11	17	15	26	18	28	33	25	26	212

The whole number of persons graduated is two hundred and four (204), five persons having received two degrees, those in Science and Engineering, and three having been awarded Master's degrees, after passing the required examinations. No honorary degrees are conferred by this university.

The whole number of women who have been graduated is fifty-nine (59), viz: bachelors of arts, 10; of science 18; of literature, 31; all of whom have completed the same courses of study as the gentlemen alumni, and undergone the same tests and examinations. So far as observed, the young women have preserved their health as well as the young men. The records of the registrar's office will show that they have not been inferior in any kind of studies. Their degrees, therefore, are of precisely the same value as those received by the young men.

EQUIPMENT.

The library has been increased by the addition of a few hundred volumes which have been carefully selected. Although this

is the best and largest library in the State, it is far from being suitable to the age and pretensions of the institution. In our remote situation, the library is the principal source of knowledge for the teachers. The present collection of books could be made of much greater use, if at least one more assistant librarian could be afforded.

The new experimental farm on Como avenue, referred to in the last report, has been increased by the purchase of some ninety acres of adjacent territory. A commodious farm house has been erected and some of the necessary outbuildings. The principal barn is yet to be put up. The expense of this work is necessarily very great, but the number of students availing themselves practically of its advantages does not increase.

The fruit farm at Minnetonka, in charge of Mr. Peter M. Gideon, continues to promise returns on the investment.

The geological survey has been diligently prosecuted by Professor Winchell and his assistants. The first volume of the final report is now ready for issue, and will be found an interesting and valuable contribution to general science and to the industrial forces of the state.

Since the last report the campus has been enlarged by the addition of some three and a half acres of adjacent ground, and upon this extension the regents have just erected the military building, being the first of the structures provided for by the act of the legislature of 1881. This building has been so constructed, as to render it available upon occasion as a large assembly hall, for commencement exercises and other large public gatherings of the University.

There has been purchased for the engineering department a testing machine, of 50,000 pounds capacity, which has already proven very serviceable as a means of investigation in the strength of materials.

The United States Coast Survey has presented a complete set of the United States standard weights and measures, which are in charge of the professor of engineering.

For more particular information in regard to the outfit and the wants of the institution, reference is made to the contemporaneous report to the board of regents.

NEW DEPARTMENTS.

THE COLLEGE OF MEDICINE.

Since the last report a new department, that of Medicine, has been organized and opened upon a somewhat novel plan for our country. A special announcement has just been (June, 1884) published giving an account of the action of the board of regents in organizing the college, and of the faculty of the college since its opening. Reference is respectfully made to this announcement. The fundamental principles of the organization are set forth in the report of a committee appointed by the board to draw up a plan for the college:

"1. To provide a thoroughly competent and independent faculty, whose duty shall be to examine all candidates for licenses and degrees in medicine of the University; who shall be in no way connected with the preparation of such candidates for such examination, and whose sole aim shall be to maintain a standard of qualification fully equal to the highest, and fully in accord with the needs and demands of the people and the time.

"2. That said faculty shall insist upon a clearly defined preliminary, literary and scientific qualification.

"3. That the professional examination shall, under rigid but reasonable rules, consist of such written, oral and clinical tests as shall fully develop the fitness of candidates, and that stenographic reports of such oral and clinical examinations be taken and preserved.

"4. That for the degree of doctor of medicine, in addition to all other qualifications, there shall be required the preparation and defense of an original thesis upon a professional topic."

The organization was effected January 5, 1883. At the last commencement, May 29, 1884, two gentlemen, having undergone the examinations successfully, received the degree B. M.

By a law passed by the legislature of 1883, the medical faculty of the University was made a State Medical Examining Board, and since December 31, 1883, it has been unlawful for any person to begin the practice of medicine in Minnesota without having first obtained the certificate of this board. These functions, it should be understood, are distinct from and additional to those

of the faculty of the University proper. The law, and the action of the board under it, seems to have met the approval of the medical profession and of the people of the State generally.

ARTISANS' TRAINING SCHOOL.

At the beginning of the last year a definite organization was given to a body of work which had been carried on in the College of Mechanic Arts, a special announcement of which was made in September, 1883. On account of the importance of the matter of industrial education in the present time, I submit the substance of that announcement for insertion here:

ARTISANS' TRAINING SCHOOL, A DEPARTMENT OF THE COLLEGE OF MECHANIC ARTS OF THE UNIVERSITY OF MINNESOTA.

This school is the outgrowth of the experiment made during the last three years in giving instruction in shop work, drawing and mathematics to young men intending to become artisans, and to those already at work in the trades.

METHOD OF INSTRUCTION.

The instruction in shop work is given by means of a series of exercises, carefully planned, so as to cover, in a systematic manner, the usual operations in use in the various trades. This course is designed entirely with a view to giving instruction in the use of tools, and not with the object of constructing any article of commerce. For example, in the course in vice work, the work begins with a simple exercise in removing the scale from a piece of cast iron, and afterward filing it to a true plane surface between two lines marked on the sides. During this exercise the student learns how to hold his file and how to move it without rocking, as well as the method of testing a plane surface with a straight edge. From this exercise he passes to more difficult ones, in each of which he applies what he has previously learned, and is taught something new. The course in vice work includes filing to line, filing to template, free-hand filing, fitting, and chipping straight and curved surfaces in cast iron, wrought iron and steel. A similar series of exercises is worked out in the course in forge work, which includes bending, upsetting, drawing, welding, shaping, punching, tempering in water and oil, and with pine wood test.

The course in wood-work also is upon the same plan, and includes exercises in sawing, planing, jointing, chiseling, marking, etc.

Experience has shown that young men taking courses similar to the above become expert in the use of such tools as are covered by the courses, in a very short time, and that they are able readily to master the special details of the various trades into which these operations enter.

In drawing, beginners are first given a course covered by a text book* prepared by officers of this school. After finishing this work and becoming reasonably expert in the use of instruments, the student is given practice in making such finished and working drawings as are best suited to his special case.

In mathematics the instruction covers algebra, solid geometry and trigonometry, taught with special reference to the needs of this class of students, and giving many applications to practical matters. Students may also receive instruction in land surveying during the third term.

EQUIPMENT.

The vise shop is furnished with benches, on which are ten vises, with as many complete sets of the tools used in this course, such as files, squares, calipers, chisels, etc. In the forge shops are eight fixed and one portable forge. The fixed forges are supplied with blast by a Sturtevant pressure blower, and the smoke carried off by means of a Sturtevant exhaust fan, both of which were presented by Mr. B. F. Sturtevant, of Boston. These fans are run by a small Haskins vertical engine set up in this shop. The pulleys and shafting used here were presented by O. A. Pray, of Minneapolis. There are eight anvils, with as many complete sets of tongs and other tools required in the course. The wood shop has benches and the necessary tools for the course. The drawing room is provided with desks for sixty students, and has a collection of drawings and "blue prints," which is constantly increasing.

OFFICERS.

William W. Folwell, President of the University.
 William A. Pike, Professor of Engineering.
 John F. Downey, Professor of Mathematics.
 Wilbur F. Decker, Instructor in Shop-work and Drawing.
 Henry M. Waitt, Instructor in Surveying and Drawing.

* Mechanical Drawing, by Wm. F. Pike and Wilbur F. Decker, 8vo, Minneapolis, 1881.

ORGANIZATION.

The students of this school are separated into four divisions, viz. : A. Those who wish to devote themselves wholly to shop-work and industrial drawing, as a preparation for entering upon active life; B. those desiring to receive instruction in mathematics, as well as in shop-work and drawing; C. those whom circumstances prevent from taking either of these courses, and who wish day instruction in drawing; D. the evening drawing class for working artisans.

COURSES OF INSTRUCTION — A DIVISION.

<i>I. Term.</i>	<i>II. Term.</i>	<i>III. Term.</i>
Vise Work.	Forge Work.	Wood Work.
Drawing.	Drawing.	Drawing.

B DIVISION.

<i>I. Term.</i>	<i>II. Term.</i>	<i>III. Term.</i>
Vise Work.	Forge Work.	Wood Work.
Drawing.	Drawing.	Drawing.
Algebra.	Trigonometry.	Solid Geometry or Surveying.

C DIVISION.

Industrial Drawing, beginning at any time but to be pursued consecutively.

D DIVISION.

Twenty-five evening lessons in Mechanical Drawing, beginning November 7, at 7:30 p. m.

CONDITIONS OF ADMISSION.

For any division, candidates must be at least fifteen years of age, and must pass examinations as follows: A Division—in reading, writing and arithmetic; B Division—in reading, writing, arithmetic, plane geometry and elementary algebra. Members of this division who pass examination in geography and U.

A history may be allowed to select studies from the Collegiate Department, under direction of the faculty; C and D Divisions no examination required.

All members of this school are required to deposit \$5 with the treasurer of the University, or his agent, which will be returned to members of divisions A, B, and C, when connection with the school ceases, less such charges as may be made for damage to tools or other property, and to members of division D when their connection ceases, if they have been regular in attendance, less such charges for damages as may be made. Divisions A, B and C will come under general regulations as to attendance, etc.

TIMES FOR ENTERING.

Students of the B division should, if possible, enter at the beginning of the year; of the A division, at the beginning of terms; of the C division, preferably at the beginning of terms; and of D division, on November 7, as stated above.

GENERAL INFORMATION.

Students in this school have access to the library, under the usual rules.

Tools and materials for use in the shops are furnished free. Each student furnishes his own drawing instruments and materials. A list and description of these may be found in Pike and Decker's Mechanical Drawing, pages three to seven.

Students can obtain board in private families in the neighborhood at \$1 a week and upwards, and in clubs for \$2 a week and upwards.

For any further information apply personally, or by letter, to Prof. Wm. A. Pike, at the University.

CONCLUSION.

The period of two years covered by this report has been one of steady growth. As was expected by the faculty, as well as by the board, the discontinuance of the fourth class of the collegiate department at the close of the year 1878-79, reduced the attendance and the numbers of the lower classes. In the year 1880-81, the

number of applicants admitted upon examination was fifty-three; in the year following, fifty-seven. In 1882-83 the number rose to sixty-three, and in the year just closed (1883-84) to eighty-seven. The great majority of these applicants were admitted to the sub-freshman class and many of them on probation. It will be many years before the institution recovers from the effects of the premature discontinuance of the preparatory work. Still there is, as the records show, noticeable progress.

It is but justice to the faculty to mention the circumstances under which the work of the past year has been carried on. As the time came on for the opening of the year, there were found to be vacancies in the following positions and departments: the presidency, mental and moral philosophy and history, English language and literature, military science, Latin, Scandinavian languages and literatures, the registrar.

On the Saturday preceding the beginning of the fall term, the writer of this report was induced to continue in office as president. An instructor was soon found to take the mental and moral philosophy. The Scandinavian and military science chairs were left unoccupied. Different members of the faculty came forward and took the remaining work, and so distributed it as to carry it on with a good degree of success.

All of which is respectfully submitted.

WORK OF THE YEAR 1882-83.

THE YEAR BEGAN SEPTEMBER 5, 1882, AND ENDED MAY 31, 1883.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
MATHEMATICS. PROFESSOR J. F. DOWNRY.						
Higher Algebra.....	Olney.....	Downey.....	28	Freshm'n	23	I.
Analytic Geometry.....	".....	".....	53	Junior.....	10	I.
Higher Algebra.....	".....	Hutchinson.....	29	Freshm'n	26	I.
Trigonometry.....	".....	Downey.....	34	Freshm'n	26	II.
Differential Calculus.....	".....	".....	54	Junior.....	9	II.
Higher Algebra, 1 $\frac{1}{2}$	".....	Hutchinson.....	51	Sub Fresh	21	II.
" " 2 $\frac{1}{2}$	".....	".....	26	"	22	II.
Conic Sections.....	".....	Downey.....	34	Sophom.....	23	III.
Integral Calculus.....	".....	".....	57	Junior.....	10	III.
Solid Geometry, 1 $\frac{1}{2}$	Wentworth.....	Hutchinson.....	55	Sub Fresh	17	III.
" " 2 $\frac{1}{2}$	".....	".....	55	"	15	III.
Conic Sections.....	Olney.....	".....	33	Sophom.....	8	III.
ASTRONOMY. PROFESSOR J. F. DOWNRY.						
Descriptive.....	Loomis.....	Downey.....	53	Senior.....	3	I.
Practical.....	".....	".....	54	"	4	II.
".....	".....	".....	50	"	7	III.
CHEMISTRY. PROFESSOR J. A. DODGE.						
Elementary.....	Barker's.....	Dodge.....	55	Sub Fresh	27	I.
Applied.....	Lectures.....	".....	55	Sophom.....	12	I.
Analytical.....	Appleton's.....	Dodge & Noyes.....	55	Jun., Sen.	9	I.
analytical.....	Appleton's, etc.....	" ".....	55	"	14	II.
analytical.....	".....	" ".....	30	Sophom.....	9	II.
General.....	Avery's.....	Dodge.....	55	Freshm'n	19	III.
Elementary.....	Barker's.....	Dodge & Noyes.....	55	Freshm'n	13	III.
analytical.....	Appleton's.....	" ".....	55	Jun., Sen.	9	III.
analytical.....	".....	" ".....	22	Sophom.....	8	III.
PHYSICS. PROFESSOR WM. A. PIKE, in charge.						
Light and Electricity.....	Ganot.....	Decker.....	57	Sophom.....	10	I.
Elementary.....	Peck's, Ganot.....	".....	57	Sophom.....	9	I.
Sound and Heat.....	Ganot.....	".....	48	Freshm'n	13	II.
Practical Physics.....	".....	Pike & Decker.....	50	Senior.....	4	III.
BOTANY. PROFESSOR C. W. HALL.						
Elementary.....	Gray's.....	Hall.....	57	Sub Fresh.	23	III.
Advanced.....	".....	".....	57	Freshm'n	21	III.
".....	Lectures.....	".....	57	Fresh Sen.	13	III.
".....	Laboratory.....	".....	57	Freshm'n	13	III.
ZOOLOGY. PROFESSOR C. W. HALL.						
Comparative.....	Lectures.....	Hall.....	55	Junior.....	11	I.
".....	Laboratory.....	".....	50	"	11	I.
Elementary.....	Lectures and.....	".....	20	Sophom.....	10	III.
".....	Laboratory.....	Herrick.....	25	"	10	III.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term
GEOLOGY AND MINERALOGY. PROFESSOR C. W. HALL.						
Geology, general.....	Le Conte.....	Hall.....	55	Senior.....	24	I.
Geology, economic.....	Lectures.....	".....	47	".....	10	II.
Mineralogy.....	Lectures.....	".....	57	Junior.....	17	II.
".....	Laboratory.....	".....	36	".....	17	II.
ENGLISH. PROFESSOR M. MARSTON.						
American Authors, etc.....	Boyre's.....	Mrs. Wilkin.....	55	Sub-Fresh.....	14	I.
How to Write Clearly.....	Abbott's Manual.....	".....	55	Freshm'n.....	10	I.
History of the English Language.....	Lectures.....	Marston.....	53	Sophom.....	9	I.
Reading of Chaucer.....	Carpenter.....	".....	53	".....	9	I.
British Eloquence.....	Goodrich and Lectures.....	".....	53	Senior.....	11	I.
Addison, etc.....	Hudson.....	Mrs. Wilkin.....	53	Sub-Fresh.....	16	II.
Books and Reading.....	Lectures.....	Marston.....	6	".....	55	II.
Milton.....	Sprague & Lect.....	".....	53	Freshm'n.....	9	II.
Anglo-Saxon.....	Carpenter.....	".....	53	Sophom.....	14	II.
Macaulay, Scott, etc.....	Harper Series.....	Mrs. Wilkin.....	56	Sub-Fresh.....	11	III.
Shakespeare.....	Rolle & Abbott.....	".....	56	Freshm'n.....	7	III.
Anglo-Saxon.....	Carpenter.....	Marston.....	50	Sophom.....	4	III.
English Literature.....	Lect'res & Ward.....	".....	16	Junior.....	17	III.
English Criticism.....	Lectures.....	".....	24	Senior.....	17	III.
GERMAN. PROFESSOR J. G. MOORE.						
Goethe's Faust.....	Hart.....	Moore.....	56	Sen & Jun.....	16	I.
Grammar.....	Whitney.....	".....	56	".....	16	I.
Reader.....	Boisen.....	".....	56	Junior.....	14	I.
Schiller's Egnout, etc.....	Buchhelm.....	".....	56	Freshm'n.....	15	I.
Grammar.....	Comfort.....	Mrs. Wilkin.....	56	Sub-Fresh.....	18	I.
".....	".....	".....	56	".....	14	I.
Schiller's Wilhelm Tell, etc.....	Buchhelm.....	Moore.....	54	Sen & Jun.....	10	II.
Grammar.....	Whitney.....	".....	54	Junior.....	10	II.
Reader.....	Boisen.....	".....	51	".....	10	II.
German History.....	Taylor.....	".....	54	Freshm'n.....	14	II.
Historical Ballads.....	Wagner.....	".....	51	".....	14	II.
Grammar.....	Whitney.....	Mrs. Wilkin.....	54	Sub-Fresh.....	14	II.
Reader.....	Boisen.....	".....	54	".....	14	II.
Grammar.....	Whitney.....	".....	54	".....	13	II.
Reader.....	Boisen.....	".....	54	".....	13	II.
Laocoon.....	Lessing.....	Moore.....	58	Sen & Jun.....	9	III.
Deutsche Lyrik.....	Buchhelm.....	".....	58	".....	9	III.
Hermann and Dorothea.....	Hart.....	".....	58	Junior.....	9	III.
Minna von Barnhelm.....	Buchhelm.....	".....	68	Freshm'n.....	17	III.
Grammar.....	Whitney.....	Mrs. Wilkin.....	57	Sub-Fresh.....	20	III.
Reader.....	Boisen.....	".....	57	".....	20	III.
FRENCH. PROFESSOR C. W. BENTON.						
Literature; age of Louis XIV.....	Cornelle, etc.....	Benton.....	55	Senior.....	17	I.
Grammar and Reader, §1.....	Bocher's Otto.....	".....	56	Sophom.....	14	I.
Grammar and Reader, §2.....	".....	".....	56	".....	13	I.
La Grammaire.....	Sicuteur.....	".....	53	Senior.....	18	II.
Modern Drama.....	Feuillet.....	".....	53	".....	18	II.
History of France.....	Fleury.....	".....	53	".....	18	II.
Hist. Novel; Cinq Mars.....	Vigny.....	".....	53	".....	18	II.
Art.....	Taine's.....	".....	53	".....	18	II.
Grammar and Reader, §1.....	Bocher.....	".....	50	Sophom.....	14	II.
Grammar and Reader, §2.....	".....	".....	50	".....	13	II.
Translations into French.....	Lectures.....	".....	55	Senior.....	15	III.
Literature of 18th Century.....	".....	".....	55	".....	15	III.
Grammar and Reader.....	Bocher.....	".....	55	Sophom.....	20	III.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Clas.	No. of Students.	Term.
RHETORIC AND ELOCUTION.		PROFESSOR M. L. SANFORD.				
<i>(Continued.)</i>						
Orations		"	75	Junior.....	25	II.
Elocution		"	50	"	25	II.
Rhetoric	Hepburn	"	60	Sophom.....	30	II.
Compositions		"	12	Freshm'n ..	34	II.
Elocution		"	12	Sub Fresh ..	36	II.
Orations		"	57	Senior	19	III.
Elocution		"	76	"	19	III.
Orations		"	30	Junior.....	10	III.
Elocution		Sanford.....	45	Sophom.....	15	III.
Compositions		"	45	"	15	III.
Elocution		"	12	Freshm'n ..	42	III.
PUBLIC HEALTH AND HYGIENE.		PROFESSOR C. N. HEWITT, M. D.				
Sanitary Science.....	Lectures.....	Hewitt	6	Senior	20	III.
School Hygiene.....	"	"	6	Sub Fresh ..	60	I.
INDUSTRIAL DRAWING.		PROFESSOR WM. A. PIKE.				
Projections	Pike & Decker..	Waitt	60	Freshm'n ..	24	I.
Geometrical	"	Pike & assist'nts	55	Sub Fresh ..	29	II.
Descriptive Geometry.....	Pike (notes) ..	"	55	Sophom.....	12	II.
Miscellaneous	Pike & Decker..	"	25	Evening... ..	51	II.
Miscellaneous	"	Waitt	58	Special.....	7	III.
AGRICULTURE.		PROFESSOR E. D. PORTER.				
No instruction in 1882-3. Old experimental farm sold and new one purchased.						
CIVIL & MECH. ENGINEERING.		PROFESSOR WM. A. PIKE.				
Curves, Levelling & Earthwork.....	Lectures.....	Waitt	50	Jun. C. E. ..	4	I.
Field Work and Drawing	"	"	50	"	4	I.
Machinery	Pinwin.....	Pike & Decker..	50	Sen. M. E. ..	1	I.
Drawing	"	"	60	"	1	I.
Arches, Retaining Walls, etc.....	Lectures.....	Waitt	55	Sen. C. E. ..	3	I.
Stereotomy	"	"	60	"	3	I.
Railroad Work and Drawing	Field Work ..	"	60	"	4	I.
Shop Work	"	Decker	55	Special.....	3	I.
Mechanics (Statics).....	Rankine	Waitt	51	Jun. C. E. ..	6	II.
Drawing (Descrip. Geometry).....	Watson	"	55	"	6	II.
Roofs, Trusses & Motive Power.....	Lectures.....	Pike	55	Sen. C. E. ..	4	II.
Drawing	"	"	55	"	3	II.
Steam Engine.....	Goodere	Pike	50	Sen. M. E. ..	1	II.
Mechanics and Strength Mater'ls.....	Rankine	Pike	55	Jun. C. E. ..	5	III.
Topography and Drawing	"	Waitt	58	"	7	III.
Designs and Specifications	"	Pike & Waitt ..	58	Sen. C. E. ..	3	III.
Designs and Specifications.....	"	Pike	58	Sen. M. E. ..	1	III.
Drawing on Designs.....	"	Waitt	58	Sen. C. E. ..	3	III.
Drawing on Designs.....	"	Pike	58	Sen. M. E. ..	1	III.
Surveying	"	Waitt	22	Freshm'n ..	15	III.
Strength of Materials	"	Waitt	50	Str C&ME ..	4	III.
MILITARY SCIENCE.		PROFESSOR E. C. BOWEN, U. S. A.				
Squad and Company Drill.....	Upton.....	Bowen	30	3 Lower....	85	I.
Officers' Drill	"	"	25	Sophom.....	20	II.
MUSIC.		PROFESSOR WM. H. LETH.				
Vocal Lessons	Selections.....	Leth	20	At Large... ..	50	Alt.

WORK OF THE YEAR 1883-84.

THE YEAR BEGAN SEPT. 4, 1883, AND ENDED MAY 29, 1884.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
MATHEMATICS.						
PROFESSOR J. F. DOWNEY.						
General Geometry.....	Olney.....	Downey.....	54	Junior.....	6	I.
Higher Algebra.....	".....	".....	55	Fresh.....	47	I.
Differential Calculus.....	Olney.....	Downey.....	55	Junior.....	4	II.
Trigonometry.....	".....	".....	31	Fresh.....	45	II.
Higher Algebra.....	".....	".....	54	Sub Fresh.....	60	II.
Integral Calculus.....	Olney.....	Downey.....	55	Junior.....	4	III.
Conic Sections.....	".....	".....	35	Sophom.....	25	III.
Solid Geometry, 1.....	Wentworth.....	Hutchinson.....	56	Sub Fresh.....	31	III.
Solid Geometry, 2.....	".....	".....	56	Sub Fresh.....	32	III.
PROFESSOR J. F. DOWNEY.						
ASTRONOMY.						
Descriptive Astronomy.....	Newcomb.....	Downey.....	54	Senior.....	10	I.
Practical Astronomy.....	Loomis.....	Downey.....	50	Senior.....	6	III.
PROFESSOR J. A. DODGE.						
CHEMISTRY.						
Elementary.....	Ellot & Storer.....	Dodge.....	55	Sub Fresh.....	24	I.
Applied.....	Lectures.....	".....	55	Sophom.....	7	I.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	55	Jun & Sen.....	12	I.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	50	Jun & Sen.....	17	II.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	30	Soph.....	7	II.
General.....	Avery.....	Dodge.....	55	Freshm.....	28	III.
Elementary (Continued).....	Ellot & Storer.....	".....	55	Freshm.....	25	III.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	55	Jun & Sen.....	18	III.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	22	Soph.....	4	III.
PROFESSOR W. A. PIKE, in charge.						
PHYSICS.						
Mechanics.....	Peck.....	Decker.....	55	Junior.....	8	I.
Light and Electricity.....	Ganot.....	".....	55	Sophom.....	8	I.
General Physics.....	Gage.....	".....	55	Sophom.....	11	I.
Sound and Heat.....	Ganot.....	".....	49	Freshm.....	24	II.
Testing Materials.....	".....	Pike.....	"	Sen C Eng.....	3	II.
PROFESSOR C. A. HALL.						
BOTANY.						
Elementary.....	Gray's.....	Hall.....	56	Subfresh.....	24	III.
Elementary.....	".....	".....	56	Freshman.....	24	III.
Advanced.....	Lectures.....	".....	50	".....	28	III.
Advanced.....	Laboratory.....	".....	62	".....	28	III.

PUBLIC INSTRUCTION.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
ZOOLOGY.						
PROFESSOR C. W. HALL.						
Comparative	Lectures	Hall	56	Junior	10	I.
Comparative	Laboratory	"	56	"	10	I.
Elementary	Lectures	Herrick	56	Sophom.	5	III.
Elementary	Laboratory	"	56	"	5	III.

GEOLOGY AND MINERALOGY.						
PROFESSOR C. W. HALL.						
General	Le Conte	Hall	56	Senior	23	I.
Economic	Lectures	"	44	"	7	II.
Mineralogy, Elementary	"	"	55	Junior	10	II.
Mineralogy, Determinative	Laboratory	"	"	"	10	II.

ENGLISH.						
PROFESSOR M. L. SANFORD AND PROF. G. E. MACLEAN in charge.						
British Eloquence	Goodrich	Sanford	55	Senior	9	I.
Chaucer	"	"	55	Sophom.	7	I.
American Authors	Royse's	Mrs. Wilkin	56	Subfresh.	24	I.
Criticism	Abbot's	"	55	Freshm'n	10	I.
Burke and Wordsworth	Hudson's	"	"	"	"	"
Anglo-Saxon	Corsen	Sanford	55	Sophom.	9	II.
Milton	"	"	55	Freshm'n	6	II.
Burns, Goldsmith	Hudson's	Mrs. Wilkin	52	Subfresh.	20	II.
Anglo-Saxon	Corsen	McLean	55	Sophom.	3	III.
English Literature	Shaw	"	55	Junior	14	III.
English Literature	Bascom & lect's.	"	52	Senior	11	III.
Scott and Macaulay	Harper's	Mrs. Wilkin	56	Subfresh.	15	III.
Shakespeare	Hudson's	"	57	Freshm'n	16	III.

GERMAN.						
PROFESSOR J. G. MOORE.						
Goethe's Faust	Hart	Moore	56	Sen. & Jun	13	I.
Grammar and Reader	Whitney	"	56	Junior	13	I.
Schiller's Egmont, etc.	Buchheim	"	56	Freshm'n	18	I.
Grammar	Whitney	Mrs. Wilkin	56	Subfresh.	30	I.
Grammar, 1st §	Macmillan	"	56	"	21	I.
Grammar, 2d §	"	"	"	"	"	"
Schiller's Wallenste'n	Schiefer	Moore	51	Sen. & Jun	13	II.
Lessing's Nathan der Weise	Whitney	"	51	Junior	11	II.
Grammar and Reader	"	"	51	Freshm'n	15	II.
History and Historical Ballads	Taylor	"	51	Subfresh.	20	II.
Grammar and Reader	Wagner	Mrs. Wilkin	51	"	28	II.
Grammar, 2d §	Whitney	"	51	"	"	"
History of German Literature	Lectures	Moore	51	Sen. & Jun	14	III.
Deutsche Lyrik	Buchheim	"	55	Freshm'n	20	III.
Goethe's Hermann & Dorothea	Hart	"	55	Subfresh.	27	III.
Grammar	Whitney	"	"	"	"	"
Reader	Bolsen	Mrs. Wilkin	56	"	17	III.
Grammar and Reader	"	"	"	"	"	"

FRENCH.						
PROFESSOR C. W. BENTON.						
Grammar and Reader	Bocher's Otto	Benton	54	Sophom.	29	I.
Classical French Literature	Racine, etc.	"	55	Seniors	13	II.
Compositions	La Fontaine	"	"	"	"	"
History of France	Fleury	"	"	"	"	"
Grammar and Reader, 1st §	Bocher	"	53	Sophom.	15	II.
Grammar, 2d §	"	"	53	Sophom.	11	II.
Philosophy of Art	Taine	Benton	54	Senior	11	II.
History of Art in Italy	"	"	"	"	"	"
Modern Drama	Scribe	"	"	"	"	"

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Time.
BRANCH.—Continued.						
PROF. C. W. BENTON.						
Grammar and Reader.....	Bocher..... La Fontaine..... Clement.....	Benton.....	55	Sophom.....	20	III
Metrical Exercises.....	Victor Hugo..... Vigny.....	".....	60	Senior.....	8	III.
Language of the XIX Century	Lectures					
LATIN.						
PROF. J. BROOKS IN CHARGE.						
Grammar and History.....	Chase & Stuart..... Lincoln.....	Hutchinson..... Brooks.....	57	Sophom..... Freshm..... Sub Fresh	13 23 23	I. I. I.
Exam on Ent. and Condition.....	Chase & Stuart.....	Brooks and Hutchinson.....			117	I.
Exam on.....	Harrington.....	Hutchinson.....	50	Junior.....	6	II.
Exam on.....	Frieze.....	".....	50	Sub Fresh	25	II.
Exam on Condition.....		Brooks and Hutchinson.....			46	II.
Exam on.....	Harrington.....	Brooks.....	56	Sophom.....	8	III.
Exam on Condition.....	Frieze.....	Hutchinson.....	56	Sub Fresh	21	III.
					3	III.
GREEK.						
PROF. J. BROOKS, D. D.						
Bocher's H. H., Etc.....	Boise.....	Brooks.....	55	Junior.....	3	I.
Lectures on Homer.....	".....	".....	3	".....	3	I.
Winans's Memorabilia.....	Winans.....	Hutchinson.....	55	Freshm.....	8	I.
Grammar and Reader.....	Brooks.....	Brooks.....	60	Sub Fresh	6	I.
Exam on Ent. and Condition.....		Brooks and Hutchinson.....			20	I.
Exam on.....		Brooks.....	48	Sophom.....	7	II.
Exam on.....	Mather.....	".....	21	".....	7	II.
Exam on.....	".....	Hutchinson.....	50	Freshm.....	8	II.
Exam on.....	Winans.....	Brooks.....	53	Sub Fresh	6	II.
Exam on Conditions.....	Brooks.....	".....			10	II.
Exam on.....	Neale.....	".....	50	Sophom.....	7	III.
Exam on.....	".....	".....	14	".....	7	III.
Exam on.....	Hestop.....	Hutchinson.....	56	Freshm.....	7	III.
Exam on.....	Boise.....	Brooks.....	57	Sub Fresh	4	III.
Exam on Conditions.....		".....			2	III.
MENTAL AND MORAL PHILOSOPHY.						
MR. T. PEEBLES.						
History of Philosophy.....	Lectures.....	Peebles.....	50	Senior.....	21	I.
Exam.....	Calderwood, 1/2 Lectures, 1/2	".....	53	Senior.....	21	II.
Exam.....	McCosh.....	".....	51	Junior.....	19	II.
Exam.....	Lectures.....	".....	58	Senior.....	10	III.
Exam.....	Lectures.....	".....	14	Junior.....	15	III.
HISTORY.						
MR. T. PEEBLES IN CHARGE.						
Exam.....	Barnes.....	Peebles.....	90	Sub Fresh	18	I.
Exam.....	Thalheimer.....	".....	22	Freshm.....	32	II.
Exam.....	Lectures.....	".....	22	Sophom.....	23	II.
PATRIAL SCIENCE, ETC.						
MR. WM. W. FOLWELL.						
Exam of Civilization.....	Gutzot.....	Folwell.....	35	Junior.....	18	I.
Exam of Philology.....	Lectures.....	".....	20	".....	18	I.
Exam.....	De Tocqueville.....	".....	29	".....	17	II.
Exam of the U. S.....	Lectures.....	".....	10	".....	17	II.
Exam of Minnesota.....	".....	".....	10	".....	17	II.
Exam of Law.....	".....	".....	41	".....	24	III.
Exam of Economy.....	".....	".....	6	".....	24	III.

Subjects.	Text Books.	Instructors.	No. of Exercise.	Class.	No. of Students	Term.
RHETORIC AND ELOCUTION. PROFESSOR M. L. SANFORD.						
Orations.....		Sanford.....	53	Senior.....	20	I.
Elocution.....		".....	80	".....	20	I.
Orations.....		".....	39	".....	13	I.
Elocution.....		".....	26	".....	13	I.
Elocution.....		".....	60	Sophom.....	30	I.
Compositions.....		".....	10	Sub Fresh	66	I.
RHETORIC AND ELOCUTION. PROFESSOR M. L. SANFORD.						
Orations.....		Sanford.....	63	Senior.....	21	II.
Elocution.....		".....	84	".....	21	II.
Orations.....		".....	30	Junior.....	10	II.
Elocution.....		".....	20	".....	10	II.
Rhetoric.....	Hill	".....	60	Sophom.....	24	II.
Compositions.....		".....		".....	39	II.
Elocution.....		".....		Sub Fresh	67	II.
RHETORIC AND ELOCUTION. PROFESSOR M. L. SANFORD.						
Orations.....		Sanford.....	92	Senior.....	23	III.
Elocution.....		".....	92	".....	23	III.
Orations.....		".....	60	Junior.....	20	III.
Elocution.....		".....	60	".....	20	III.
Compositions.....		".....	81	Sophom.....	28	III.
Elocution.....		".....	12	Freshm.....	32	III.
PUBLIC HEALTH. PROFESSOR C. N. HEWETT, M. D.						
Sanitary Science.....	Lectures.....	Hewitt.....	6	Senior.....	21	III.
School Hygiene.....	".....	".....	6	Sub Fresh	65	I.
INDUSTRIAL DRAWING. PROFESSOR W. A. PIKE in charge.						
Draughting.....	Pike and Decker	Pike, Decker and Waitt.....	55	Freshm.....	26	I.
Descriptive Geometry.....	Pike Prints	Pike, Waitt and Decker.....	57	Sophom.....	7	II.
Drawing.....	Pike and Decker	Pike, Waitt and Decker.....	51	Sub Fresh	35	II.
Drawing.....	Pike and Decker	Pike.....	51	Artisans.....	12	II.
Drawing.....	Pike and Decker	Pike and Waitt.....	57	".....	30	III.
Drawing.....	Pike and Decker	".....	57	Special.....	3	III.
Drawing.....	Pike and Decker	".....	49	Artisan, D	47	III.
AGRICULTURE. PROFESSOR E. D. PORTER.						
No regular instruction this year. One student was directed in his studies.						
CIVIL AND MECHANICAL ENGINEERING AND ARCHITECTURE. PROFESSOR WM. A. PIKE.						
Elements of Mechanics.....	Goodloe.....	Pike.....	53	Jun'r M E	1	I.
Curves, Leveling, Etc.....	Heuck.....	Waitt.....	54	" C E	5	I.
Architecture.....		Pike.....		" Arch	1	I.
Field Work.....		Waitt.....	51	Junior.....	4	I.
Arches and Hydraulics.....	Cain and Box.....	Pike.....	54	Sen. C E	3	I.
Stereotomy.....		Waitt.....	54	" " "	3	I.
Drawing.....		Pike.....	47	" " "	3	I.
Mechanics.....	Rankine.....	Waitt.....	7	Junior.....	4	II.
Descriptive Geometry.....	Watson.....	".....	51	".....	5	II.
Roofs, Etc.....	Pike Prints.....	Pike.....		Senior.....	3	II.
Drawing.....		".....	51	".....	3	II.
Mechanics, Dynamics.....	Rankine.....	".....	51	Junior.....	2	II.
Mechanics, Statics.....	Rankine.....	Waitt.....	1	Junior.....	2	III.
Drawing.....		Pike.....	57	".....	2	III.
Topography, Etc.....		Waitt.....	60	".....	2	III.
Designs, Etc.....		Pike.....	47	Senior.....	3	III.
Drawing.....		Pike and Waitt.....	47	".....	3	III.
Surveying.....	Lect. & field w.	Waitt.....	20	Fresh.....	37	III.
SHOP WORK. PROFESSOR WM. A. PIKE in charge.						
Vise Work.....		Decker.....	55	Art. & M E	4	II.
Forge Work.....		".....	25	" " "	7	II.
Wood Work.....		".....	56	" " "	8	III.
MILITARY SCIENCE. Professorship vacant.						
MUSIC. MR. WM. H. LEIB.						
Choral Lessons.....	Lectures.....	Leib.....	20	[At Large.]	57	I & II