



Catalogue of the University of Wisconsin for the academic year 1881-82. October, 1881

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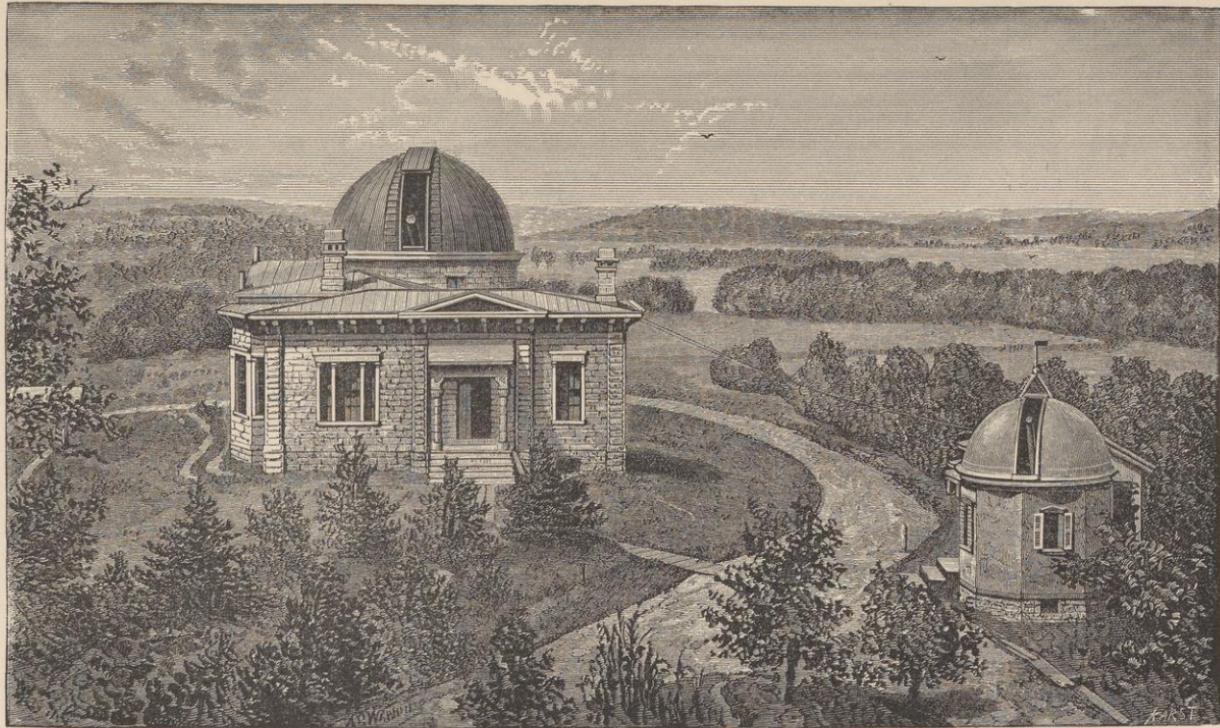
Catalogue

OF THE

University of Wisconsin

FOR THE

Academic Year, 1881-82.



WASHBURN OBSERVATORY—UNIVERSITY OF WISCONSIN.

CATALOGUE

OF THE

UNIVERSITY OF WISCONSIN

FOR THE

ACADEMIC YEAR 1881-82.

MADISON, WISCONSIN.

OCTOBER, 1881.

The Sentinel Company,
Printers,
Milwaukee, Wis.

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REORGANIZATION.

Chapter 144, General Laws of 1866.

SECTION 1. The object of the University of Wisconsin shall be to provide the means of acquiring a thorough knowledge of the various branches of learning connected with scientific, industrial, and professional pursuits; and to this end it shall consist of the following colleges, to wit: 1st, The College of Arts; 2d, The College of Letters; 3d, Such professional and other colleges as from time to time may be added thereto or connected therewith.

SECTION 2. The College of Arts shall embrace courses of instruction in the mathematical, physical, and natural sciences, with their application to the industrial arts, such as agriculture, mechanics and engineering, mining and metallurgy, manufactures, architecture, and commerce; in such branches included in the College of Letters as shall be necessary to a proper fitting of the pupils in the scientific and practical courses for their chosen pursuits; and in military tactics; and as soon as the income of the University shall allow, in such order as the wants of the public shall seem to require, the said courses in the sciences, and their application to the practical arts, shall be expanded into distinct colleges of the University, each with its own faculty and appropriate title.

SECTION 3. The College of Letters shall be co-existent with the College of Arts, and shall embrace a liberal course of instruction in languages, literature, and philosophy, together with such courses, or parts of courses, in the College of Arts as the authorities of the University shall prescribe.

Amendment of 1867.

SECTION 1. The University shall be open to female as well as male students, under such regulations and restrictions as the Board of Regents may deem proper: and all able-bodied male students of the University, in whatever college, shall receive instruction and discipline in military tactics, the requisite arms for which shall be furnished by the state.

BOARD OF REGENTS.

STATE SUPERINTENDENT OF PUBLIC INSTRUCTION,

Ex-Officio Regent.

Life Member..... C. C. WASHBURN..... Madison.

Term Expires first Monday in February, 1882.

State at Large..... GEO. H. PAUL..... Milwaukee.
8th Congressional District..... J. M. BINGHAM..... Chippewa Falls.

Term Expires first Monday in February, 1883.

State at Large..... E. W. KEYES..... Madison.
1st Congressional District..... J. G. McMYNN..... Racine.
3d " " W. E. CARTER..... Platteville.
6th " " L. B. SALE..... Green Bay.

Term Expires first Monday in February, 1884.

7th Congressional District..... CHAS. D. PARKER..... Pleasant Valley.
5th " " HIRAM SMITH..... Sheboygan Falls.
2d " " W. F. VILAS..... Madison
4th " " GEO. KOEPHEN..... Milwaukee.

OFFICERS OF THE BOARD.

GEORGE H. PAUL,
PRESIDENT.

W. E. CARTER,
VICE-PRESIDENT.

JOHN S. DEAN,
SECRETARY.

STATE TREASURER,
EX-OFFICIO TREASURER.

EXECUTIVE COMMITTEE.

E. W. KEYES, W. F. VILAS, W. E. CARTER.

HIRAM SMITH, CHAS. D. PARKER, GEO. KOEPHEN.

COMMITTEE ON LIBRARY, COURSE OF STUDY, AND TEXT-BOOKS.

L. B. SALE, W. C. WHITFORD, J. G. McMYNN.

COMMITTEE ON LAW DEPARTMENT.

J. M. BINGHAM, W. E. CARTER, W. F. VILAS.

FACULTIES, INSTRUCTORS AND OFFICERS.

JOHN BASCOM, D. D., LL. D., President and Professor of Mental and Moral Philosophy.

Professors of the Colleges of Art and Letters—*

JOHN WHELEN STERLING, PH. D., Vice President and Professor of Mathematics.

WILLIAM FRANCIS ALLEN, A. M., Professor of Latin and History.

ALEXANDER KERR, A. M., Professor of the Greek Language and Literature.

JOHN BARBER PARKINSON, A. M., Professor of Civil Polity and Political Economy.

JOHN EUGENE DAVIES, A. M., M. D., Professor of Physics.

WILLIAM WILLARD DANIELLS, M. S., Professor of Chemistry.

WILLIAM H. ROSENSTENGEL, A. M., Professor of the German Language and Literature.

JOHN CHARLES FREEMAN, A. M., Professor of English Literature.

CAPTAIN CHARLES KING, U. S. Army, Professor of Military Science and Tactics.

EDWARD SINGLETON HOLDEN, A. M., Director of the Washburn Observatory and Professor of Astronomy.

ROLAND DUER IRVING, PH. D., Professor of Geology and Mineralogy.

FLETCHER ANDREW PARKER, Professor of Music.

RASMUS ANDERSON, A. M., Professor of Scandinavian Languages.

DAVID BOWER FRANKENBURGER, PH. B., Professor of Rhetoric and Oratory.

EDWARD THOMAS OWEN, A. B., Professor of the French Language and Literature.

EDWARD ASAHEL BIRGE, PH. D., Professor of Zoology.

ALLAN DARST CONOVER, C. E., Professor of Civil and Mechanical Engineering.

WILLIAM ARNON HENRY, AGR. B., Professor of Botany and Agriculture.

Professors of the Law Faculty—

J. H. CARPENTER, LL. D., Dean of the Faculty and Professor of Criminal Law and Contracts.

WILLIAM F. VILAS, LL. B., Professor of Practice, Pleadings and Evidence.

HON. I. C. SLOAN, Professor of Equity and Real Estate.

HON. S. U. PINNEY, Professor of Corporations, Real Estate, and Wills.

HON. ROMANZO BUNN, Professor of Federal Jurisprudence.

HON. P. L. SPOONER, Professor of Mortgages, Tax Titles, Etc.

CLARK GAPEN, Professor of Medical Jurisprudence.

*In order of the time of Collegiate Graduation.

†On leave of absence in Europe.

Instructors—

| | |
|---|-----------------------------|
| MRS. D. E. CARSON, | Mathematics. |
| ELLEN CHYNOWETH, A. B., | German. |
| ALICE JESSIE CRAIG, B. L., | Elocution. |
| FLORA ELIZABETH DODGE, A. B., | French. |
| LUCIUS HERITAGE, A. M., | Latin. |
| WILLIAM HOLME WILLIAMS, A. B., | Greek. |
| CHARLES A. VAN VELZER, | Mathematics. |
| CHARLES ISAAC KING, Sup't of Machine Shops, Practical Mechanics. | |
| STORM BULL, MECH. E., | Engineering. |
| CHARLES RICHARD VANHISE, B. M. E., B. S., Metallurgy and Chemistry. | |
| GEORGE CARY COMSTOCK, PH. B., | Assistants in the Astronom- |
| SHERBURNE WESLEY BURNHAM, A. M., | ical Observatory. |
| MAGNUS SWENSON, B. M. E., | Assistant, University Farm. |

Janitors—

| | |
|-------------------|----------------------------------|
| PATRICK K. WELSH, | University Hall and Dormitories. |
| JAMES H. RIDER, | Science Hall. |
| JAMES M. ASHBY, | Ladies' Hall. |
| TIMOTHY PURCELL, | Library and Assembly Hall. |
| JOHN DOESCHER, | Astronomical Observatory. |

Committee in Charge of the Library—

| | | |
|----------------------------------|---------------------------------------|--------------------|
| PRESIDENT BASCOM; | PROFESSOR FREEMAN, <i>Secretary</i> ; | PROFESSORS |
| BIRGE, IRVING, AND ROSENSTENGEL. | | |
| THERÈSE S. FAVILL, | | Library Attendant. |

CLASS OFFICERS 1881-82.

SENIOR CLASS.

| | |
|-------------------------|----------------------|
| Classical Courses, | Professor Parkinson. |
| General Science Course, | Professor Irving. |

JUNIOR CLASS.

| | |
|---------------------------|--------------------------|
| Ancient Classical Course, | Professor Frankenburger. |
| Modern Classical Course, | Professor Allen. |
| General Science Course, | Professor Davies. |

SOPHOMORE CLASS.

| | |
|---------------------------|------------------|
| Ancient Classical Course, | Professor Kerr. |
| Modern Classical Course, | Mr. Heritage. |
| General Science Course, | Professor Birge. |

FRESHMAN COURSE.

| | |
|---------------------------|-------------------------|
| Ancient Classical Course, | Mr. Williams. |
| Modern Classical Course, | Professor Rosenstengel. |
| General Science Course, | Mrs. Carson. |
| TECHNICAL STUDENTS, | Professor Conover. |
| SPECIAL STUDENTS, | Professor Kerr. |
| AGRICULTURAL COURSE, | Professor Henry. |
| GREEK CLASS, | Mr. Williams. |

DEGREES CONFERRED.

COMMENCEMENT, 1881.

BACHELOR OF ARTS.

| | |
|--------------------------|-------------------------|
| Edward Brady. | Alfred Edson McCurdy. |
| Julia Kirkland Clark. | Webster Marcellus Pond. |
| Louis Chynoweth. | Frank Monro Porter. |
| Charles Roundtree Evans. | Stanley Proudfit. |
| Edwin Haroldson Evenson. | Otto Joel Scovell. |
| Eloise Johnson | Howard Leslie Smith. |
| Charles H. Kerr. | James Desnoyer VanDyke. |
| William Penn Lyon, Jr. | Gerhardt Hubert Balg. |

BACHELOR OF LETTERS.

| | |
|--------------------------|------------------------------|
| Margaret Belle Allen. | Elisha William S. Keyes, Jr. |
| Salmon Wirt Dalberg. | Daniel Seymour McArthur. |
| Charles Albert Foster. | William Joseph Moroney. |
| William Herbert Goodall. | Maud Estelle Remington. |
| Mary Evelyn Green. | May Belle Remington. |
| Otto Hottelman. | Edward Benjamin Steensland. |
| Julia Maria Johnson. | Charles Robinson Warren. |

BACHELOR OF SCIENCE.

| | |
|-----------------------|--------------------------|
| Irenaeus T. Crisler. | Elizabeth R. Schofield. |
| Emma Gattiker. | Lynn Boyd Squier. |
| Eva Caroline Goodall. | Eugene A. Steere. |
| Julius Nelson. | Frederick Sanford White. |
| Barnis Babcock Rose. | |

BACHELOR OF CIVIL ENGINEERING.

| | |
|-----------------|---------------------|
| Arthur Cooper. | Alva Jarvis Grover. |
| Charles Lapham. | |

BACHELOR OF MECHANICAL ENGINEERING.

| |
|------------------------|
| Joshua Norris Sanborn. |
| |

BACHELOR OF METALLURGICAL ENGINEERING.

| | |
|----------------------|-----------------|
| Will Nelson Merriam. | Thomas W. Parr. |
| | |

BACHELOR OF LAW.

| | |
|------------------------|-------------------------------|
| Julius Alanson Barnes. | William H. McDonald. |
| John Brennan. | Major C. Mead. |
| Harris Decatur Booge. | Charles Southard Miller, |
| Charles Newton Brown. | Ph. B., Albion College, Mich. |

BACHELOR OF LAW—CONTINUED.

| | |
|---|-------------------------------|
| J. W. Burhaus. | Joseph Morley. |
| P. H. Conley. | Edwin Prescott Parish. |
| Frank Cooper. | Walter Curtis Palmer. |
| Wendell W. Cornwall. | Byron B. Parke. |
| Ph. B., Albion College. | Edward Joy Paul, A. B. |
| Edgar Monroe Deming. | J. L. O'Connor. |
| S. A. Harper. | Solon Lewis Perrin. |
| Caleb Monroe Hillard. | Lewis Augustus Pradt. |
| Howard Henry Hoyt. | Julius Edward Roehr. |
| D. B. Jenckes. | Charles M. Scanlan. |
| George M. Laing. | Marshall K. Snell. |
| Byron Cook Lamont. | Horace Kent Tenney. |
| Louis L. Manwaring, | Henry Edward Ticknor. |
| B. S., Iowa State Agricultural College. | B. S., Galesville University. |
| Albert John Marsh. | Dell S. Tullar. |

CIVIL ENGINEER.

Charles Lapham, B. C. E.

MASTER OF ARTS (ON EXAMINATION).

Samuel Whitney Trousdale, A. B.

DOCTOR OF LAWS.

Washington Gladden, A. M., Williams College.

HONORS OF THE SECOND GRADE.

| |
|---|
| Howard L. Smith, College of Letters. |
| Charles H. Kerr, College of Letters. |
| Emma Gattiker, College of Arts. |
| Julius Nelson, College of Arts. |
| William J. Moroney, College of Letters. |

SPECIAL HONORS.

| |
|--|
| Joshua N. Sanborn, Mechanical Engineering—Corliss Valve Gears. |
| Charles H. Kerr, French Literature—Victor Hugo's Reform in the French Drama. |
| Julia K. Clark, Greek—The Potency of Ulysses. |
| Thomas W. Parr, Chemistry—Our Daily Bread. |
| Stanley Proudfit, Greek—Demosthenes. |
| Julius Nelson, Zoology—Some Observations on the Living Embryo of the Trout. |

UNIVERSITY STUDENTS.

RESIDENT GRADUATE.

Julius Nelson, B. S., Waupaca, Mrs. A. Paunack's. —1

SENIOR CLASS.

ANCIENT CLASSICAL COURSE.

| | | |
|-------------------------------|-------------------|----------------------|
| Florence Bascom, | Madison, | Pres. Bascom's. |
| John Anton Theodore Bjornson, | Madison, | G. Bjornson's. |
| Albion Barnard Burr, | River Falls, | 28 N. D. |
| Eugene Edwin Campbell, | River Falls, | 28 N. D. |
| Emmet Addis Drake, | Monroe, | Mrs. M. A. Beat's. |
| Charles Friedel, | Jefferson, | W. Hogbin's. |
| Kate Asaphine Everest, | Fond du Lac, | Ladies' Hall. |
| Ole E. Hagen, | Rock Falls, | Mrs. A. Paunack's. |
| Louis Rollin Head, | Albion, | Chi Psi House. |
| Edwin Knight Holden, | Sparta, | C. C. G. Thornton's. |
| Frederick Weller Jones, | Appleton, | Chi Psi House. |
| George Henry Milman, | Elk Grove, | 73 S. D. |
| William James Mutch, | Elroy, | 54 S. D. |
| Frank Frederick Oster, | Sparta, | Chi Psi House. |
| Ewing Law Patterson, | Terre Haute, Ind. | R. G. Brennan's |
| Edward Burton Priest, | Fond du Lac, | J. Murray's. |
| Calvin Chamberlain Todd, | Fond du Lac, | J. Dowell's. |
| Charles William Wells, | Milwaukee, | Chi Psi House. —18 |

MODERN CLASSICAL COURSE.

| | | |
|---------------------------|------------------|---------------------|
| Sarah Chambers, | Madison, | W. Chambers'. |
| Nellie Cynthia Chase, | Madison, | S. L. Chase's. |
| John Jacob Esch, | Sparta, | 54 S. D. |
| Arthur Haines French, | Kenosha, | W. Davidson's. |
| Lucy Maria Gay, | Madison, | M. H. Gay's. |
| Minnie May Gilbert, | Prospect Hill, | I. Prescott's. |
| Joseph Hallam, | Dodgeville, | Mrs. M. Porter's. |
| Arthur Hatch, | McGregor, Ia. | Chi Psi House. |
| Thomas Heatherwicke Kirk, | Lake Crystal, M. | J. M. Clifford's. |
| Mary Clara Lamb, | Madison, | F. J. Lamb's. |
| Mary Mackenzie, | Sparta, | Ladies' Hall. |
| John James McAnaw, | Columbus, | 33 S. D. |
| Harry Huntington Powers, | Madison, | J. R. Melvin's. |
| Charles Byron Quincy, | Lancaster, | 30 S. D. |
| David Ferguson Simpson, | Waupun, | M. Devine's. |
| Frances Sedgwick Wiggan, | Patterson, N. J. | J. R. Melvin's. —16 |

GENERAL SCIENCE COURSE.

| | | |
|---------------------------|--------------|----------------------|
| Charles Lewis Alverson, | Portage, | W. Davidson's. |
| Charles William Cabeen, | Milwaukee, | J. R. Melvin's. |
| Edward Jerome Collins, | Verona, | E. Cole's. |
| John F. Collins, | Verona, | E. Cole's. |
| William P. Collins, | Verona, | E. Cole's. |
| William Eckley Dodds, | Madison, | Prof. Daniells'. |
| Marion Clark Frisby, | West Bend, | Miss A. F. Frisby's. |
| Albert Thomas Gamble. | Wausau, | 31 N. D. |
| Henry Halbersleben, | Reedsburg, | M. O'Connor's. |
| Homer Winthrop Hillyer, | Waupun, | M. Devine's. |
| Fannie Sabra Howe, | Mazomanie, | 83 State Street. |
| Frank Azro Howe, | Mazomanie, | 83 State Street. |
| Granville Duane Jones, | Fond du Lac, | 73 S. D. |
| Frithiof Kumlien, | Busseyville, | 30 N. D. |
| Charles Warren Rose. | Big Bend, | 72 S. D. |
| Francis Robert Salisbury, | Madison, | J. Steele's. |
| Albert Monroe Sawin, | Brooklyn, | C. Nebel's. |
| Dominic Schuler, | Madison, | D. Schuler's. |
| James Sheridan, | Waterloo, | 83 N. D. |
| James S. Thomas, | Reedsburg, | Mrs. A. Hines'. |

—20

CIVIL ENGINEERING COURSE.

| | | |
|--------------------------|------------|------------------|
| Charles Grant Carpenter, | Windsor, | 47 S. D. |
| Frederick William Fratt, | Racine, | Chi Psi House. |
| Caleb Notbohm Harrison, | Milwaukee, | Mrs. Harrison's. |

—8

MINING AND METALLURGY COURSE.

| | | |
|---------------------------|---------|----------------|
| Oscar James Frost, | Almond, | E. C. Mason's. |
| Thomas Williamson Haight, | Syene, | 47 S. D. |
| Alvin Franklin Rote, | Monroe, | J. Murray's. |

—3

—

JUNIOR CLASS.

ANCIENT CLASSICAL COURSE.

| | | |
|--------------------------|---------------|-----------------------|
| Harry Hamlin Beaser, | Ashland, | 41 N. D. |
| Erwin Charles Cornelius, | Monroe, | Mrs. M. A. Beat's. |
| Ida Bell Fales, | Janesville, | Ladies' Hall. |
| Charles Diller Fratt, | Racine, | Chi Psi House. |
| Daniel Monroe Held, | Blackhawk, | 87 N. D. |
| Lorrain Sherman Hulbert, | Monroe, | Mrs. M. A. Beat's. |
| Charles Osborne Marsh, | Sun Prairie, | 47 S. D. |
| Luther Packard, | Spring Green, | Mrs. S. D. Packard's. |
| Wendell Wyman Paine, | Madison, | Mrs. C. R. Paine's. |
| August Charles Umbreit, | Milwaukee, | A. Kentzler's. |
| Clarence Deuel Van Wie, | Kenosha, | J. Murray's. |

—11

MODERN CLASSICAL COURSE.

| | | |
|--------------------------------|----------------|---------------------|
| Lillie Jane Beecroft, | Madison, | W. G. Beecroft's. |
| Martha Miller Dodge, | Monroe, | L. M. Fay's. |
| Arthur James Dopp, | Oconomowoc, | M. M. Cade's. |
| Frederick William Dustan, Jr., | Sun Prairie. | 54 N. D. |
| Eliza Bellows Hoyt, | Hudson, | Ladies' Hall. |
| Melvin Arista Hoyt, | Menom. Falls, | Mrs. A. E. Havens'. |
| Kate McDill, | Plover, | Ladies' Hall. |
| Edward George McGilton, | Cedar Falls, | J. Murray's. |
| Ernest Stiles Moe, | Union Grove, | Mrs. A. E. Havens'. |
| Susan Jane Mylrea, | Kilbourn City, | Ladies' Hall. |
| Edward B. Pryor, | Madison, | 53 N. D. |
| Eleanor O'Sheridan, | Madison, | D. O'Sheridan's. |
| Alice Jane Sanborn, | Freeport, Ill. | Ladies' Hall. |
| Emma Josephine Sarles, | Madison, | Mrs. K. L. Sarles'. |
| Thomas Henry Synon, | Madison, | J. Mathew's. |
| William Tillotson, | Madison, | H. Higham's. |
| Michael Jefferson Wallrich, | Brighton, | 83 N. D. |
| Emma Adelaide Weston, | Necedah, | Ladies' Hall. —18 |

GENERAL SCIENCE COURSE.

| | | |
|--------------------------|---------------|-----------------------|
| Charles Lewis Billings, | Cobb, | Chi Psi House. |
| Florian Cajöri, | Madison, | P. Behrend's. |
| John Melvin Clifford, | Evansville, | 29 Gilman Street. |
| David Scott Kennedy, | Troy, | P. Behrend's. |
| Samuel Searle Lanyon, | Belmont, | F. Smith's. |
| August Christian Larsen, | Eau Claire, | 59 University Avenue. |
| Kate McGovern, | Madison, | A. McGovern's. |
| Edwin Curry Stevens, | Avoca, | 70 S. D. |
| Willis Guy Witter, | Grand Rapids, | T. Morgan's. —9 |

CIVIL ENGINEERING COURSE.

| | | |
|----------------------------|--------------|-------------|
| Frank Chester Beardsley, | Bloomington, | 56 N. D. |
| Charles Urban Boley, | Hartford, | 70 N. D. |
| Conrad Martinus Conradson, | Brooklyn, | 80 N. D. |
| Leander Miller Hoskins, | Evansville, | 67 N. D. |
| Arthur Wilfred Shelton, | River Falls, | 80 N. D. —5 |

MECHANICAL ENGINEERING COURSE.

| | | |
|------------------------|----------|---------------------|
| Joseph Dodge, | Monroe, | L. M. Fay's. |
| Henry William Pennock, | Madison, | A. C. Pennock's. —2 |

AGRICULTURAL COURSE.

| | | |
|----------------------|-----------|----------|
| Joseph Charles Hart, | Marshall, | 92 N. D. |
| | | —1 |

SOPHOMORE CLASS.

ANCIENT CLASSICAL COURSE.

| | | |
|-----------------------------|--------------|-----------------------|
| William Edward Aitchison, | Eau Claire, | 64 S. D. |
| Clara Delia Baker, | Madison, | J. U. Baker's. |
| Leslie Lyel Brown, | La Crosse, | 43 N. D. |
| *Agnes Campbell Butler, | Madison, | J. D. Butler's. |
| Frank Wellington Gage, | Madison, | Mrs. A. Paunack's. |
| Clarence John Hicks, | Omro, | 27 N. D. |
| Olin Bailey Lewis, | Omro, | 27 N. D. |
| Willis Haven Miner, | Madison, | H. A. Miner's. |
| William Beebe Monroe, | Monroe, | Chi Psi House. |
| Harry Leonard Moseley, | Madison, | J. E. Moseley's. |
| James Crumbaker Officer, | Springville, | C. Gopen's. |
| Levi Newton Packard, | Madison, | Mrs. S. D. Packard's. |
| Marshall M. Parkinson, | Madison, | Prof. Parkinson's. |
| James A. Peterson, | Alderly, | 40 N. D. |
| Conrad Theodore Saunders, | Marshall, | 43 S. D. |
| Frederick Herbert Saunders, | Marshall, | 43 S. D. |
| Howard Burton Smith, | Leon, | 32 S. D. |
| James F. Trottman, | Cedarburg, | Mrs. H. Waterman's. |
| Walter Howard Waterhouse, | Madison, | H. Waterhouse's. —19 |

MODERN CLASSICAL COURSE.

| | | |
|-----------------------------|----------------|----------------------|
| Curtis Asher Boorman, | Tomah, | 57 N. D. |
| Sarah Amelia Clark, | Portage, | C. E. Ball's. |
| Florence Augusta Cornelius, | Madison, | J. W. Cornelius'. |
| *Marie Emilie Daley, | Perry, | Ladies' Hall. |
| John Eaver, Jr., | Blue Mounds, | J. D. Gurnee's. |
| Louis Coleman Haley, | Clinton, | Gill's Block. |
| Mary Lizzie Hand, | Racine, | Ladies' Hall. |
| Alice Maxwell Lamb, | Madison, | F. J. Lamb's. |
| Will McCrady, | Cobb, | A. C. Crampton's. |
| *Flora Estelle Mears, | Madison, | C. S. Mears'. |
| Julius Emil Olson, | Cambridge, | Prof. Anderson's. |
| *Carl Fremont Phillips, | Stevens Point, | M. Devine's. |
| Julia Elizabeth Ray, | Morris, Ill., | Mrs. W. A. Mears'. |
| Godfrey William Schmitz, | Manitowoc, | 42 S. D. |
| Benjamin Stewart Smith, | Ashland, | Mrs. A. Menges'. —15 |

GENERAL SCIENCE COURSE.

| | | |
|----------------------------|------------------|----------------------|
| Charles Frederic Dahl, | Orfordville, | Mrs. A. E. Havens'. |
| Edmund Goddard, | Monroe, | Miss A. F. Frisby's. |
| Benjamin Franklin Heuston, | Trempealeau, | 79 N. D. |
| Merial Lucinda Park, | Dodge's Corners, | J. Camack's. |

*In Six Years' Course.

GENERAL SCIENCE COURSE—CONTINUED.

| | | |
|-----------------------|--------------|---------------|
| Lester Paul Utter, | Trempealeau, | 79 N. D. |
| Clarence Elmer Ward, | Mazomanie, | 72 S. D. |
| Clyde Harvey Ward, | Mazomanie, | 72 S. D. |
| Martha Cornelia Week, | Hutchinson, | Ladies' Hall. |

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ENGINEERING COURSE.

| | | |
|---------------------------|------------------|------------------|
| George Willard Baldwin, | Baldwin's Mills, | T. Morgan's. |
| Joseph Trevarton Bennett, | Dodgeville, | 55 S. D. |
| Charles Ruggles Boardman, | Fond du Lac, | W. Davidson's. |
| George Edward Burrall, | Dodgeville, | 55 S. D. |
| McClellan Dodge, | Madison, | H. G. Dodge's. |
| Herman Fehr, | Milwaukee, | J. Winteler's. |
| Augustin Julius Hilbert, | Milwaukee, | J. Winteler's. |
| Frank Wilber Holt, | Brooklyn, | 67 N. D. |
| Milton Updegraff, | Decorah, Ia. | Mrs. Morgan's. |
| Charles George Wade, | Stevens Point, | S. J. Purdy's. |
| James R. Young, | Madison, | Mrs. J. Young's. |

—11

FRESHMAN CLASS.

ANCIENT CLASSICAL COURSE.

| | | |
|-----------------------------|--------------|---------------------------|
| Carrie Ella Baker, | Madison, | J. U. Baker's. |
| Charles Ilsley Brigham, | Milwaukee, | Mrs. W. J. L. Nicodemus'. |
| George Lincoln Bunn, | Madison, | R. Bunn's. |
| Rose Case, | Madison, | M. M. Case's. |
| Kate Grant Caswell, | Madison, | Mrs. L. D. Brooks'. |
| Edward J. Dockery, | Milwaukee, | W. Davidson's. |
| *Daisy Greenbank, | Madison, | N. A. Greenbank's. |
| Henry Church Hullinger, | Madison, | Mrs. K. L. Sarles'. |
| William Krueger, | Neenah, | A. Schulhof's. |
| John Hundahl Lawrence, | Madison, | O. H. Lawrence's. |
| Alice Charlotte Lindestrom, | Madison, | J. S. Lindestrom's. |
| William Harvey Miller, | Hazel Green, | M. Devine's. |
| Anna Burr Moseley, | Madison, | J. E. Moseley's. |
| Charles Fremont Niles, | Monroe, | Mrs. M. A. Beats'. |
| Mary Elizabeth Oakey, | Madison, | H. Oakey's. |
| Mark Lincoln Patek, | Milwaukee, | H. Johnson's. |
| Frederic Augustus Pike, | Oshkosh, | E. C. Mason's. |
| William H. Putnam, | River Falls, | 41 N. D. |

—18

MODERN CLASSICAL COURSE.

| | | |
|-----------------------------|------------|---------------------------|
| Fredrica Bodenstein, | Madison, | H. Bodenstein's. |
| Oscar Dalzelle Brandenburg, | Baraboo, | W. Davidson's. |
| John Watson Cary, Jr., | Milwaukee, | Mrs. W. J. L. Nicodemus'. |
| Grace Clark, | Madison, | D. Clark's. |

*In Six Years' Course.

MODERN CLASSICAL COURSE—CONTINUED.

| | | |
|----------------------------|----------------|--------------------------|
| *Fannie Ellsworth, | Madison, | Frank Ellsworth's. |
| John L. Erdall, | Madison, | Louis J. Erdall's. |
| Emma Goddard, | Monroe, | Miss A. F. Frisby's. |
| James Merrill Hutchinson, | Madison, | B. E. Hutchinson's. |
| Albert Herbert Long, | Richland City, | Mrs. C. Matthews'. |
| Thomas Lyons, | Osceola, | A. McGovern's. |
| Lizzie McMillan, | Madison, | J. McMillan's. |
| Mary Parkinson, | Madison, | Prof. J. B. Parkinson's. |
| Bertha Staples Pitman, | Madison, | Wm. G. Pitman's. |
| Frederick W. Rogers, | Hartford, | Mrs. S. Gallagher's. |
| Arabelle Sarles, | Madison, | Mrs. K. L. Sarles'. |
| Carl Edward Schlabach, | DeWitt, Ia. | C. Dietrich's. |
| Emma Marion Smith, | Mendota, | Mrs. A. W. Morden's. |
| Minnie Gray Trousdale, | Madison, | Prof. Parkinson's. |
| Edith Ballinger Updegraff, | Decorah, Ia. | Mrs. M. A. Gano's. |
| Norman Emmons Van Dyke, | Oconomowoc, | 89 N. D. |
| Charles Marshall Wales, | Elkhorn, | Mrs. Gallagher's. |
| Alice Lucretia Williams, | Madison, | H. C. Williams'. —22 |

GENERAL SCIENCE COURSE.

| | | |
|--------------------------|---------------|-------------------------|
| Henry L. Austin, | Magnolia, | 82 N. D. |
| Philip Edmund Arpin, | Grand Rapids, | Mrs. A. Morgan's |
| Patrick Henry Connolly, | Racine, | Mrs. V. V. Titus'. |
| Lizzie Ann Diment, | Mazomanie, | H. H. Draper's. |
| Charles Isaac Earll, | Whitewater, | 25 Gilman Street. |
| Louis Falge, | Manitowoc, | 23 S. D. |
| Charles Wesley Gilman, | Gilman, | 69 N. D. |
| Eugene Avery Hoyt, | Honey Creek, | H. W. Hoyt's. |
| Florence Hathaway, | Madison, | Mrs. W. K. Barney's. |
| Ralph Oren Irish, | Madison, | J. E. Irish's. |
| Richard Anton Kempter, | Alma, | C. Nebel's. |
| August Lindemann, | Milwaukee, | J. C. Ott's. |
| Elmer Dixon Malls, | Paoli, | Jones & Gregory's Bl'k. |
| Harrison Cephus Newell, | Baraboo, | 69 N. D. |
| Albert Leopold Parman, | Mazomanie, | A. Kentzler's. |
| William Henry Schultz, | Black Hawk, | Mrs. S. D. Parkhurst's. |
| Otto John Schuster, | Middleton, | H. Gath's. |
| Mina Stone, | Reedsburg, | E. D. Lyons'. |
| James Asahel Stone, | Reedsburg, | Mrs. A. Haines'. |
| Byrde McKee Vaughan, | Grand Rapids, | T. Morgan's. |
| William Henry Wasveyler, | Milwaukee, | 99 State Street. |
| George Edward Waldo, | Manitowoc, | H. Johnson's. |
| Henry Howell Wheelock, | Brooklyn, | 82 N. D. |
| Irving Clarke Webb, | Trempealeau, | 79 N. D. —24 |

* In Six Years' Course.

AGRICULTURAL COURSE.

| | | |
|------------------------|------------|------------------|
| Frederick Mason Brown, | Madison, | Mrs. T. Brown's. |
| Louis Herman Pammel, | La Crosse, | 92 N. D. |
| | | —2 |

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SPECIAL STUDENTS.

| | | |
|----------------------------|-------------------|----------------------|
| Kittie Ainsworth, | West Union, Ia. | Mrs. M. C. Foster's. |
| Charles Levi Allen, | Eau Claire, | 64 S. D. |
| John Arthur Aylward, | Black Earth, | 24 S. D. |
| Eugene Hiram Bacon, | Mauston, | S. G. Parkhurst's. |
| Osmon C. Baker, | Madison, | J. U. Baker's. |
| *William Edward Bauman, | Madison, | E. Bauman's. |
| Theron Woodman Bean, | Red Mound, | 54 N. D. |
| Idella May Bellman, | Davis, Ill. | Ladies' Hall. |
| Florence V. Bissell, | Light House, Ill. | I. Prescott's. |
| Jessie Adella Blakeley, | Evansville, | J. M. Clifford's. |
| Asa Gilbert Briggs, | Arcadia, | Mrs. S. Gallagher's. |
| Florence Helen Brown, | Stevens Point, | Ladies' Hall. |
| Isabella Brown, | Stevens Point, | Ladies' Hall. |
| James Anton Buckley, | Black Hawk, | J. Link's. |
| James Orton Buckley, | Black Hawk, | 44 N. D. |
| Thomas Reginald Buckley, | Black Hawk, | J. Link's. |
| Ethel Bushnell, | Omro, | Ladies' Hall. |
| Anna Bates Butler, | Madison, | J. D. Butler's. |
| William Homer Camp, | Waukesha, | D. Smith's. |
| Byron Beach Carter, | Platteville, | J. Murray's. |
| Charles M. Chamberlain, | Stevens Point, | M. Devine's. |
| Freemont Elmer Chandler, | Waupaca, | C. McKinnon's. |
| Rublee Alvah Cole, | Sheboygan Falls, | W. Davidson's. |
| Lawrence Peterson Conover, | Dayton, O. | O. M. Conover's. |
| Kittie May Covert, | Clinton, | Ladies' Hall. |
| Rosa Dengler, | Madison, | C. M. Dengler's. |
| Joseph Clinton Dillow, | Madison, | Mrs. H. Waterman's. |
| James Hopkins Dousman, | Milwaukee, | J. Winteler's. |
| William Franklin Duffy, | Clyman, | Mrs. M. E. Potter's. |
| John Dexter Dunwiddie, | Monroe, | 30 S. D. |
| George W. Dwinnell, | Lodi, | Mrs. A. B. Porter's. |
| William Timothy English, | Arcadia, | Mrs. V. V. Titus'. |
| Edith Evans, | Oregon, | M. Dinsdale's. |
| Adam Graham Faris, | Werley, | 29 S. D. |
| Eleanor Favill, | Madison, | J. Favill's. |
| Oscar Augustus Fechter, | Manitowoc, | 42 S. D. |
| James Hannibal Feeney, | Marshall, | 33 S. D. |
| Charles David Fenelon, | Weyauwega, | C. McKinnon's. |

*Agricultural Course.

SPECIAL STUDENTS—CONTINUED.

| | | |
|------------------------------|------------------|----------------------|
| Charles Wilbur Fiske, | Maquoketa, Ia. | M. Devine's. |
| Rosa Fitch, | Madison, | D. Fitch's. |
| Millie Cristine Forsyth, | Oconomowoc, | Ladies' Hall. |
| Frank Henry Foster, | Madison, | Mrs. M. C. Foster's. |
| John Charles Frawley, | Black Earth, | 24 S. D. |
| Leander Frank Frisby, Jr., | West Bend, | Miss A. F. Frisby's. |
| John Comstock Gaveney, | Arcadia, | Mrs. S. Gallagher's. |
| Ernest Gehrke, | Madison, | W. Gehrke's. |
| Willis Leslie Gilbert, | Prospect Hill, | Mrs. V. V. Titus'. |
| Herman Grotophorst, | Black Hawk, | Mrs. J. Young's. |
| Joseph Handschiegel, | North Bristol, | J. M. Clifford's. |
| Robert Charles Hinrichs, | Madison, | C. Hinrichs'. |
| Jessie Bradley Hopkins, | Madison, | Mrs. J. C. Hopkins'. |
| Mary Montague Howe, | Oregon, | Ladies' Hall. |
| Josephine Alice Hull, | Union, | A. C. Pennock's. |
| James David Humbert, | Cobb, | P. Behrend's. |
| Theodore Gregson Huntington, | Marshall, | C. Dietrich's. |
| Fred A. Johnson, | Madison, | J. A. Johnson's. |
| Adaline Eliza Keifer, | Spring Green, | I. Prescott's. |
| Mary Wilhelmine Krueger, | Neenah, | A. Schulhof's. |
| Ella R. Krum, | Madison, | Mrs. C. Hawley's |
| Elling E. Larson, | Eau Claire, | 57 N. D. |
| Clara Marion Macartney, | Hudson, | Ladies' Hall. |
| Emma Mackenzie, | Sparta, | Ladies' Hall. |
| Harry Louis McCrady, | Cobb, | N. D. Crampton's. |
| Frances Ellen McNair, | Brodhead, | J. R. Melvin's. |
| Rollin Bates Mallory, | Milwaukee, | Chi Psi House. |
| James Patrick Meehan, | Meehan, | T. Morgan's. |
| Etta Alice Miner, | Monroe, | H. A. Miner's. |
| James Jacob Morgan, | Madison, | A. H. Bright's. |
| Louis Phelps Munroe, | Racine, | Mrs. W. A. Mears'. |
| Albert J. Ochsner, | Black Hawk, | Mrs. J. Young's. |
| *Elmer Hiram Parker, | Pleasant Valley, | Mrs. S. Gallagher's. |
| Alice Pennoyer, | Kenosha, | Mrs. W. A. Mears' |
| Mary Elizabeth Perkins, | Montello, | Mrs. C. Hawley's. |
| Leila Ada Porter, | Madison, | Mrs. A. B. Porter's. |
| Edna Lucretia Powers, | Fort Atkinson, | J. R. Melvin's. |
| Estella Dorinda Prentice, | Evansville, | Ladies' Hall. |
| Fennimore Cooper Puckett, | Nora, Ill. | J. Winteler's. |
| Julia Sophronia Raymond, | Decorah, Ia. | Mrs. M. A. Gano's. |
| Laura May Richards, | Brooklyn, | A. C. Pennock's. |
| Henry Fletcher Roberts, | Dodgeville, | 55 S. D. |
| James Arthur Roberts, | Stoughton, | J. M. Clifford's. |
| Ruggles Stair Rockwell, | Columbus, | M. Devine's. |

SPECIAL STUDENTS—CONTINUED.

| | | |
|-------------------------------|----------------|---------------------|
| Katherine A. Rood, | Stevens Point, | Ladies' Hall. |
| Charles Ross, | Mineral Point, | C. McKinnon's. |
| Charles Whitfield Sanford, | Genesee, Ill. | N. D. Crampton's. |
| Ella R. Sanford, | Morris, Ill. | Mrs. W. A. Mears'. |
| Robert George Sayle, | New Berlin, | Mrs. V. V. Titus'. |
| Albert Theodore Schroeder, | Watertown, | 52 S. D. |
| Katherine Lyons Schuler, | Madison, | D. Schuler's. |
| Putnam David Smith, | Montfort, | 29 S. D. |
| Lilian Elsie Stair, | Black Earth, | Mrs. M. A. Gano's. |
| Nathaniel C. Strong, | Dayton, O. | O. M. Conover's. |
| Julia Louise Sturtevant, | Delavan, | Ladies' Hall. |
| Charlotte A. von Suessimilch, | Delavan, | Ladies' Hall. |
| Katharine von Suessimilch, | Waukau, | Ladies' Hall. |
| Emorette Beebe Sutherland, | Spring Green, | E. D. Lyon's. |
| Florence Della Taylor, | Madison, | D. Taylor's. |
| Jared Dewey Taylor, | Waukesha, | I. Prescott's. |
| Lottie Belle Tichenor, | Milwaukee, | Mrs. J. Young's. |
| Frank Stanley Traverse, | Monroe, | 70 S. D. |
| Benjamin Gilman Treat, | Portage, | W. Davidson's. |
| Fred J. Turner, | Middleton, | Mrs. J. Boss'. |
| Joseph Whitford Vernon, | Madison, | Mrs. F. M. Vilas'. |
| Annie Ashman Vilas, | Madison, | 70 N. D. |
| Aad Vinje, | Stevens Point, | Ladies' Hall. |
| Carrie Lorraine Wade, | Manitowoc, | H. Johnson's. |
| Mark Albigense Waldo, | Whitewater, | Mrs. S. Gallagher's |
| Rodell Curtis Warne, | Freeport, Ill. | W. Edgar's. |
| George Wilberforce Warner, | Baraboo, | Ladies' Hall. |
| Cora Belle Walbridge, | Fond du Lac, | Ladies' Hall. |
| Elizabeth Waters, | Kendalls, | E. D. Lyon's. |
| Albert E. Webb, | Monroe, | J. R. Melvin's. |
| Rose White, | Burlington, | 72 S. D. |
| James Calder Wilson, | Deansville, | 56 N. D. |
| *James Noble Wilcox, | Monroe, | Ladies' Hall. |
| Flora Hannah Wood, | Hazel Green, | D. H. Wright's. |
| Albert Williams, | Centralia, | S. J. Purdy's. |
| Harry Worthington, | Madison, | Mrs. J. Young's. |
| James Rowley Young, | | —119 |

LAW STUDENTS.

SENIOR CLASS.

| | | |
|-----------------------|-----------|----------------------|
| Nicholas Dale Baker, | Madison, | J. U. Baker's. |
| Charles Bamford, | Plymouth, | W. Davidson's. |
| Jesse Wadleigh Boyce, | Oregon, | Mrs. M. E. Porter's. |

*Agricultural Course.

LAW STUDENTS—CONTINUED.

| | | |
|---|---|---|
| Austin Freeman Butts, B. A., Beloit College. | Madison, | Bowman's Block. |
| Harry James Chapman, George Littleton Farnham, Ph. B., Beloit College. | Madison, Madison, | C. Sleightam's. Bowman's Block. |
| Alex. Dean Flemington, Daniel James Hemlock, Charles Nelson Herreid, Luther Carleton Humphrey, Charles LaFayette Kellogg, Kemper K. Knapp, B. S., Frank Dwight Larrabee, Charles Wyatt Lomas, Currie Nelson Lukes, Willis Haydn Mantor, George E. Morgan, B. C. E., Frederick E. Parish, B. A., Cornell University. | Trempealeau, Cedarburg, Madison, Madison, Madison, Winneconne, Brownsville, Pewaukee, Racine, Madison, Madison, Stoughton, | W. Davidson's. Mrs. F. Massing's. 17 Johnson Street. 17 Johnson Street. Mrs. L. F. Kellogg's, Mrs. M. E. Porter's. Mrs. M. E. Porter's. Mrs. I. P. Ketchum's. Mrs. L. F. Kellogg's. C. Sleightam's. Miss E. Bright's. Mrs. Wright's. |
| Philip Henry Perkins, B. C. E., M. S., Cornell University. | Madison, | Gill's Block. |
| Charles J. Perkins, Henry W. Phelps, Thomas Henry Reynolds, Thomas Charles Richmond, George Edgar Robinson, Howard Teasdale, John Marshall Tenney, Charles W. Tillinghast, Benson Ezra Wait, | Madison, Racine, Madison, Monticello, Brookfield, Madison, Madison, Bloomer, Lodi, | Vilas House. Mrs. I. P. Ketchum's. Thos. Reynolds'. Mrs. W. P. Thompson's. Miss E. Bright's. Mrs. S. Boss'. W. A. Mears'. Mrs. A. P. Lightbody's. Mrs. M. E. Porter's.—29 |

JUNIOR CLASS.

| | | |
|---|---|--|
| James H. Barry, Fred William Bentley, B. A., Milton College. | Madison, Edgerton, | P. D. Barry's. Mrs. I. P. Ketchum's. |
| William M. Bradley, Everett Hiram Burlingame, | Elkhorn, West Point, | Mrs. A. Menges'. H. B. Gleason's. |
| Frank A. Cady, George C. Comstock, Ph. B., University of Michigan. | Madison, Madison, | 222 Main Street. Carl Nebel's. |
| James Douglas, Jr., Samuel Baxter Foster, William McLean Graham, B. A., Oberlin College. | Alderly, Knowlton, Oshkosh, | Mrs. N. R. Peck's. Mrs. W. P. Thompson's. Mrs. L. F. Kellogg's. |
| Otto E. Hempel, James Sheldon Ingalls, Christopher O. Jerdee, Orrin Blakely Moon, | Beaver Dam, Reedsburg, Madison, Pickett's Station, | W. Friedrich's. Mrs. A. Hine's. C. O. Anderson's. Mrs. H. Waterhouse's. |

LAW STUDENTS—CONTINUED.

| | | |
|--|-------------|---------------------------|
| William Richard Nethercut, | Geneva, | Mrs. A. Menges'. |
| Frank Monroe Porter, B. A., | Madison, | Mrs. M. E. Porter's. |
| Harris Richardson, B. A., Yale College. | Janesville, | Mrs. L. F. Kellogg's. |
| Ernest H. Schwepppe, | Black Hawk, | S. D. Parkhurst's. |
| Traverse Eugene Stout, | Gilboa, O. | Mrs. W. J. L. Nicodemus'. |
| Andrew Judson Sutherland, | Eau Claire, | 51 State Street, |
| Victor John Welch, | Madison, | William Welch's. |
| John William Wegner, | Madison, | Mrs. F. Massing's. |
| Carl M. Wilson, B. A., Amherst College. | Madison, | Mrs. W. P. Thompson's. |

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GREEK CLASS.

| | | |
|-------------------------|-------------|--------------------|
| William Henry Hallam, | Dodgeville, | Mrs. M. Porter's. |
| Lillias Mason Hastings, | Green Bay, | S. D. Hastings'. |
| Andrew James Hogan, | Wonewoc, | 24 S. D. |
| John Monroe Parkinson, | Madison, | Prof. Parkinson's. |
| Albert Reed, | Madison, | P. M. Reed's. |
| Edgar Emerson Smith, | Berlin, | 69 N. D. |

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SUMMARY OF STUDENTS

IN ATTENDANCE AT THE OPENING OF THE FALL TERM, 1881.

| | |
|---------------------------------|-------------|
| <i>Resident Graduate,</i> | 1 |
| <i>Senior Class—</i> | |
| Ancient Classical Course, | 18 |
| Modern Classical Course, | 16 |
| General Science Course, | 20 |
| Civil Engineering Course, | 3 |
| Metallurgical Course, | 3 |
| | <u>— 60</u> |
| <i>Junior Class—</i> | |
| Ancient Classical Course, | 11 |
| Modern Classical Course, | 18 |
| General Science Course, | 9 |
| Civil Engineering Course, | 5 |
| Mechanical Engineering Course, | 2 |
| Agricultural Course, | 1 |
| | <u>— 46</u> |
| <i>Sophomore Class—</i> | |
| Ancient Classical Course, | 19 |
| Modern Classical Course, | 15 |
| General Science Course, | 8 |
| Engineering Courses, | 11 |
| | <u>— 53</u> |
| <i>Freshman Class—</i> | |
| Ancient Classical Course, | 18 |
| Modern Classical Course, | 22 |
| General Science Course, | 24 |
| Agricultural Course, | 2 |
| | <u>— 66</u> |
| <i>Special Students—</i> | 116 |
| " " in Agriculture, | 3 |
| | <u>—</u> |
| Total in College Studies, | 345 |
| <i>Law Students—</i> | |
| <i>Senior Class—</i> | 29 |
| <i>Junior Class—</i> | 21 |
| | <u>— 50</u> |
| <i>Preparatory Greek Class—</i> | 6 |
| | <u>—</u> |
| Total, | 401 |

COLLEGES OF ARTS AND LETTERS.

The courses of study in these colleges are arranged in accordance with the law of 1866, quoted on a former page of this catalogue.

The College of Arts embraces a General Science Course, and the Special Technical Departments of Agriculture, Civil Engineering, Mining Engineering and Metallurgy, and Mechanical Engineering.

The College of Letters embraces the Ancient Classical Course and the Modern Classical Course.

TERMS OF ADMISSION.

The regular examination of candidates for admission will be held on Thursday and Friday of the week, in June, preceding the annual commencement. Candidates should present themselves promptly at nine o'clock of the first day. Such candidates as are unable to be present at this time can be examined on the Tuesday and Wednesday preceding the opening of the fall term; but students are urged to present themselves at the regular examination, in order that, in event of failure upon any studies, they may have time to prepare themselves thoroughly upon these studies before the opening of the fall term. Otherwise they will be obliged to make up deficiencies in the entrance examination, while crowded by the sufficiently difficult studies of the term itself.

Examinations of applicants will also be held on the Wednesday morning preceding the opening of the winter and spring terms.

All candidates for admission will be examined upon the following studies: reading, spelling, penmanship, arithmetic, civil and descriptive geography, physical geography, English grammar (including sentential analysis), history of the United States, elementary algebra and plane geometry.

In addition to the above mentioned branches, candidates for the different courses will be examined as follows:

PREPARATORY GREEK CLASS.

Latin.—Grammar, large print and paradigms. Any standard grammar may be used in preparation, but the revised edition of Allen and Greenough's will be required in the class.*

Cicero. Two orations—Sallust, Conspiracy of Catiline.

Ancient History.—Barnes' Brief History of Ancient Peoples, or Anderson's Ancient History, or their equivalents. Candidates will be expected to draw from memory outline maps of the principal countries of the ancient world.

Modern History.—Thalheimer's History of England, or its equivalent.

* Latin is pronounced according to the Roman method, described on page 7 of Allen and Greenough's grammar, except that *v* has the English sound of the letter.

FRESHMAN CLASS.

All candidates for admission to the Freshman class are notified that, in addition to the usual examination in English grammar and analysis, which is required of all students on entering, and which is intended to test the pupil's knowledge of the subject rather than his familiarity with any particular text book, each applicant will be required to give a specimen of his use of the English language by writing at least two pages on a subject assigned by the professor at the hour of examination. Each applicant in 1881, will be assigned some character or event selected from one of the following works: Irving's *Tour on the Prairies*, or *Newstead Abbey* from the *Crayon Miscellany*, Carlyle's *Heroes and Hero-Worship*, Bunyan's *Pilgrim's Progress*; in 1883: Shakespeare's *Merchant of Venice*, Longfellow's *Evangeline*, George Eliot's *Romola*.

GENERAL SCIENCE COURSE.

Natural philosophy, solid geometry, physiology, botany, German (Sheldon's short German course, and 20 lessons German reader). The amount of Latin required for entering the Freshman class in the classical courses may be substituted for German.

ANCIENT CLASSICAL COURSE.

The studies required for admission to the Greek class, and in addition:

Latin.—Grammar and Composition. The amount of grammar is indicated by the two largest sizes of type in Allen and Greenough's grammar; in composition, fifty-two lessons in the revised edition of Allen's *Latin Composition*. Cicero, Four orations. Vergil, Six books. Scanning and the general rules of prosody are required.*

Greek.—Three books of Xenophon's *Anabasis*, two books of Homer's *Iliad*, and Jones' *Composition*.

MODERN CLASSICAL COURSE.

All the studies required for entering the Ancient Classical Course, except that German is substituted for Greek,† as above.

TECHNICAL COURSES.

The requirements for commencing any technical course are the same as those for entering the Sophomore class of the College of Arts.

POST GRADUATE STUDIES.

Bachelors of Arts, Letters and Sciences are enabled to continue their studies at the University under direction of the faculty, and to take the appropriate degree.

SPECIAL STUDENTS.

Special students are those who have not yet obtained a standing in any regular course, or who, not desiring to graduate, wish to select their studies. Such students may enter at any time, and take any study which they are prepared to prosecute to advantage, provided they can pass an examination in the English branches required for admission to the Freshman class general science course. Any special student can, by examination in the studies required, enter at any time into any class.

* The third oration of Cicero against Catiline, and the second book of Vergil's *Aeneid* will be the subject of special examination, and upon these an exact and critical knowledge will be expected. Candidates will bring a certificate from their teachers, stating the precise amount that has been studied.

† In and after 1883, solid geometry will be required for entering this course.

Real equivalents will be taken for any of the above requirements and for any study in any portion of the college courses. Candidates for advanced standing in any college class must, in addition to the studies above named, pass examination in those previously pursued by the class which they propose to enter, or in those equivalent to them. No one can be admitted to the Freshman class under the age of fifteen years, nor to an advanced standing without a proportional increase of age. Young women may pursue any course or elective study in the University, and the same degree is conferred upon them as upon the young men for the satisfactory completion of any course of study.

HIGH SCHOOL AND NORMAL SCHOOL GRADUATES.

Any high school in the state, whose course of instruction covers the branches requisite for admission to one or more of the colleges of the University, may make application to be entered on its accredited list. On such application the University will send a professor to examine the course and methods of instruction in the school, and, on his favorable report, will enter it on the accredited high school list of the University. The graduates of high schools so entered will be received by the University into any of its courses for which they have been fitted, without further examination. This arrangement will hold good until the administration of the high school is changed, or until notice is given by the University of unsatisfactory results. The necessary expenses attending the visit of the professor will be paid by the high school. The accredited list will be published each year in this catalogue. The University greatly desires a thoroughly good understanding with the high schools of the state, and hopes that this method may aid it in reaching that result.

A graduate of a State Normal School, or a student who has passed through the Freshman year of any college of good standing, may be admitted to the University as a special student without examination. Later he can apply for admission to any course and any class, and such examinations will then be assigned him as knowledge of his attainments may show to be necessary.

The certified standing of any student in the normal schools of this state will be accepted in the preparatory English work in place of an examination.

Those coming to the University from normal schools or from colleges, are advised to bring an authenticated record of their standing; but in all cases its value may be tested by actual examination.

Applicants for admission from other colleges must present certificates of honorable dismission. The University is open to students from other states.

ACCREDITED HIGH SCHOOLS.

| | |
|--|-------------------------|
| MADISON HIGH SCHOOL, | SAMUEL SHAW, Principal. |
| BELoit HIGH SCHOOL, | W. H. BEACH, " |
| McMynn's ACADEMY (Racine), | J. G. McMynn, " |
| ALLEN'S ACADEMY (Chicago, Ill.), | IRA W. ALLEN, " |
| MARKHAM'S ACADEMY (Milwaukee), | ALBERT MARKHAM, " |

FOR MODERN CLASSICAL AND GENERAL SCIENCE COURSES.

| | |
|-----------------------------------|----------------------------|
| EVANSVILLE HIGH SCHOOL, | C. W. MERRIMAN, Principal. |
| MILWAUKEE HIGH SCHOOL | J. J. MAPEL, " |

The following announcement is made by request of the School Board and Superintendent of the Madison Schools:

The Madison High School fits pupils for entrance to any of the courses of the University, and branches not strictly preparatory may be omitted by any member of the school. Candidates for admission will be examined upon arithmetic, English grammar, geography, U. S. history. Special stress is laid upon the first two branches. Students are admitted to advanced classes upon examination.

A special preparatory course of two years for the classical courses and one year for the scientific course has been laid out for the benefit of such students as are able to accomplish the work in that time.

Students are received and classified at any time, but it is preferred that they should present themselves at the opening of a term. Tuition is \$8.00 per term, there being three terms in the year.

Students recommended for admission to the University by the principal of the school are allowed to enter without examination. For further information address Clerk of School Board, Madison, Wis.

Attention is invited to the following law of the State, giving to graduates of the University the privilege of converting their diplomas into state certificates:

SECTION 387 * * * After any person has graduated at the State University, and after such graduation, has successfully taught a public school in this state for sixteen school months, the superintendent of public instruction shall have authority to countersign the diploma of such teacher, after such examination as to moral character, learning, and ability to teach, as to the said superintendent may seem proper and reasonable. Any person holding a diploma granted by the board of regents of the state university, certifying that the person holding the same is a graduate of the state university, shall, after his diploma has been countersigned by the state superintendent of public instruction as aforesaid, be deemed qualified to teach any of the public schools of this state, and such diploma shall be a certificate of such qualification until annulled by the superintendent of public instruction.

COURSE OF STUDY.

An increased instructional force renders it possible for the University to offer a wider range of studies than heretofore, and also opportunity for more extended study in the several branches. With these ends in view, the following schemes of studies and elections have been prepared.

Elections must be made in accordance with the following regulations:

I. Students must have at least three daily exercises; an additional study may be taken when the average standing of the student is 85 and upwards.

II. Elections for any term must be made before the close of the preceding term.

III. No elections can be changed after two weeks of the term have passed.

IV. Students must conform their elections to the time table.

V. In the General Science Course, at least three terms' work must be taken in chemistry or physics; and three terms' work in mineralogy and geology, zoology, or botany. The minimum amount of science allowed for graduation in this course is nine terms; but by election the student may take twenty terms.

By a "term's work" is meant one exercise daily for one term.

Unless otherwise stated there is one exercise daily in each study.

VI. By consent of the faculty, studies in the technical courses may be substituted for studies in the general courses.

VII. Students may elect studies of other years than that to which they belong, by consent of the faculty; provided, such elections be made in accordance with Rule IV.

VIII. Students entering the General Science Course may substitute the Latin required for entering the Modern Classical Course for the German required for entering their own course. They may, also, elect ancient languages in place of modern languages; provided they do so in accordance with Rule IV.

IX. Students who have studied chemistry or physics for two terms, may continue these studies, as electives, through any one or more of the remaining terms of the course.

X. Students will obtain blank election cards from their class officers, to whom the cards are to be returned. Students are advised to consult their class officers in making elections.

XI. If less than six persons present themselves for any elective course, the formation of the class will be left to the discretion of the faculty and the professor in charge.

COLLEGE OF ARTS.

GENERAL SCIENCE COURSE.

FRESHMAN YEAR.

FIRST TERM.

| | |
|---------------------|-----------------------------------|
| Mathematics, | Higher Algebra. |
| English,* | Anglo-Saxon and English Analysis. |
| German, | Review and Reader. |
| Optional, | Norse. |

SECOND TERM.

| | |
|---------------------|---------------------------|
| Mathematics, | Solid Geometry. |
| English, | Anglo-Saxon and Analysis. |
| German, | Die Einsamen. |
| Optional, | Norse. |

THIRD TERM.

| | |
|--|-----------------------------------|
| Mathematics, | Plane and Spherical Trigonometry. |
| Botany, | Lectures. |
| German, | Wilhelm Tell. |
| Themes and declamations throughout the course. | |

* French may be substituted for this study by those who are to take the Engineering Course. But the French will not be received as equivalent for Anglo-Saxon from students in the General Science Course.

SOPHOMORE YEAR.

FIRST TERM.

Required—
Analytical Geometry.

Rhetoric.

Elective—
Zoology* (long course), Protozoa to Mollusca.
Botany.
French.†

SECOND TERM.

Required—
Mechanics or Calculus.‡

Elective—
Zoology (long course), Mollusca, Arthropoda.
Botany.
Physiology.
Calculus or Mechanics.
French.

THIRD TERM.

*Required—***Zoology**|| (short course).*Elective—***Zoology** (long course), Vertebrata.**Botany.****Vertebrate Anatomy**,§ Pisces, Amphibia, Reptilia.**Calculus.****French.****Early English.**

* Those electing the long course in zoology, must continue the study through at least two terms.

† This study, and the remaining elective studies in languages, are to be taken with the classical students. See Regulation VII.

‡ Students refusing mechanics, must take calculus for two terms and analytical mechanics one term. Those electing mechanics and calculus need not take analytical mechanics.

|| Required only of students not electing the long course.

§ If elected, must be pursued for two terms. Must be preceded by at least one term of laboratory work in zoology.

JUNIOR YEAR.

FIRST TERM.

*Required—***Physics.***Elective—***Chemistry*** (long course), General Chemistry, Lectures, and Laboratory work.**Vertebrate Anatomy.****Analytical Mechanics**.†**Descriptive Geometry.****Advanced French and German.****English Literature.****History.****Norse.**

SECOND TERM.

*Required—***Chemistry**‡ (short course).*Elective—***Physics** (long course), Electricity and Magnetism.**Chemistry** (long course), General Chemistry and Qualitative Analysis.**Mineralogy**|| Crystallography, Physical Mineralogy and Blowpipe Analysis.**Mathematics.****Advanced French and German.****English Literature.****History.****Norse.**

THIRD TERM.

Elective—

Physics (long course), Electrical Measurements.
Chemistry (long course), Organic Chemistry and Qualitative Analysis.
Mathematics.
Mineralogy, Blowpipe Analysis and Determinative Mineralogy.
Advanced French and German.
Constitutional Law.
English Literature.
History.
Norse.

* If elected, must be followed for at least two consecutive terms.

† Must be preceded by two terms of calculus.

‡ Required only of students not electing the long course.

|| Must be preceded by at least one term of chemistry.

SENIOR YEAR.

FIRST TERM.

Required—

Psychology.

Elective—

Physics* (long course), Magnetic Measurements.
Chemistry* (long course), Quantitative Analysis.
Geology*† (long course), Lithology, Structural and Dynamical Geology.
Mathematics.
Astronomy*‡ (long course).
Advanced French and German.
Political Economy and International Law.
Philosophy of Rhetoric.

SECOND TERM.

Required—

Geology|| (short course).

Elective—

Physics* (long course), Theory of Heat.
Chemistry* (long course), Quantitative Analysis, or advanced work in Experimental Chemistry.
Geology* (long course), Stratigraphical Geology and Palaeontology.
Mathematics.
Astronomy* (long course).
Advanced French and German.
Deductive Logic.§
Ethics.§
English Literature.

THIRD TERM.

*Required—***Astronomy**|| (short course).*Elective—***Physics** (long course), Polarization of Light, Spectrum Analysis, Measurement of Wave Lengths.**Chemistry** (long course), Same as second term.**Mathematics.****Economic Geology.****Astronomy** (long course).**Advanced French and German.****English Literature.****Aesthetics and Natural Theology.**§**Inductive Logic.**§**Constitutional Law.**

* At least one of these studies must be elected in each term.

† Must be preceded by at least one term of chemistry and two terms of mineralogy.

‡ Must be preceded by two terms of calculus.

|| Required only of students not electing the long course.

§ At least one of these studies must be elected in each term.

DEPARTMENT OF AGRICULTURE.

The design of this department is to give a thorough and extensive course of scientific instruction, in which the leading studies shall be those that relate to Agriculture.

Students taking the Agricultural Course will pass the same entrance examinations as is required for the General Science Course. Upon completion of the course they will receive the appropriate degree.

Those who may desire to enter as special students in Agriculture, or to take a short course, can do so upon passing a satisfactory examination in the common English branches, a list of which is given on p. 23. For details in relation to the Agricultural studies, see subject *Agriculture*, under "Departments of Study."

AGRICULTURAL COURSE.

FRESHMAN YEAR.

FIRST TERM.

Mathematics,

Higher Algebra.

German,

Review and Reader.

Machine Shop Practice.

SECOND TERM.

| | |
|-------------------------------|-----------------|
| Mathematics, | Solid Geometry. |
| German, | Die Einsamen. |
| Machine Shop Practice. | |

THIRD TERM.

| | |
|--|-----------------------------------|
| Mathematics, | Plane and Spherical Trigonometry. |
| Botany, | Lectures. |
| German, | Wilhelm Tell. |
| Themes and declamations throughout the course. | |

SOPHOMORE YEAR.

FIRST TERM.

| | |
|----------------------------|---|
| Rhetoric. | |
| Cryptogamic Botany, | Including a Study of Rusts, Smuts, etc. |
| Zoology. | |
| Free-Hand Drawing. | |

SECOND TERM.

| | |
|------------------------------|----------------------------------|
| Mechanics. | |
| Zoology, | Anatomy of Domesticated Animals. |
| Agricultural Drawing. | |

THIRD TERM.

| | |
|------------------------|----------------------------------|
| Zoology, | Anatomy of Domesticated Animals. |
| Land Surveying. | |
| Entomology. | |
| Botany, | Cross-fertilization of Plants. |

JUNIOR YEAR.

FIRST TERM.

| | |
|----------------------------|-------------------------------|
| Physics. | |
| Chemistry, | Lectures and Laboratory Work. |
| English Literature. | |
| Horticulture, | Fruit Raising. |

SECOND TERM.

| | |
|-------------------------------|---|
| Chemistry, | General Chemistry and Qualitative Analysis. |
| Topographical Drawing, | Mapping of Farm. |
| Botany, | Grasses. |

THIRD TERM.

| | |
|----------------------------|------------------------|
| Chemistry, | Quantitative Analysis. |
| Horticulture, | Management of Garden. |
| Constitutional Law. | |

SENIOR YEAR.

FIRST TERM.

| | |
|---------------------------|---------------------------|
| Agriculture, | Management of Farm Crops. |
| Chemistry, | Quantitative Analysis. |
| Political Economy. | |
| Psychology. | |

SECOND TERM.

| | |
|---|-------------------------|
| Agriculture, Principles of Stock-breeding, History of Breeds, Management of Stock. | |
| Agricultural Chemistry, | Soils, How Plants Feed. |
| Farm Bookkeeping. | |
| Logic. | |

THIRD TERM.

| | |
|--------------------------------|------------------------------------|
| Agriculture, | General Farm Management, Draining. |
| Agricultural Chemistry, | How Plants Grow. |
| Aesthetics. | |
| Landscape Gardening. | |

Special work in Agriculture in preparation for Thesis.

DEPARTMENT OF CIVIL ENGINEERING.

COURSE OF STUDY.

FRESHMAN YEAR.

Students may elect this course at the beginning of the Freshman year, and in this case may substitute the study of French for that of Anglo-Saxon, during the first and second terms.

In case of an election of the Engineering Course at the beginning of the Freshman year, students report for instruction in draughting at once.

The requirements for admission to the course are the same as those for entering the Sophomore Class of the General Science Course.

SOPHOMORE YEAR.

FIRST TERM.

| | |
|------------------------------|----------------------------|
| Descriptive Geometry. | |
| Analytical Geometry. | |
| Chemistry, | General. |
| Drawing, | Free-Hand and Geometrical. |
| Field Practice. | |

SECOND TERM.

| | |
|-------------------|-----------------------------------|
| Calculus. | |
| Chemistry, | Lectures and Laboratory Practice. |

Stereotomy.**Drawing,**

Map Projection and Stereotomy Problems.

THIRD TERM.

Calculus.**Surveying.****Chemistry,****Drawing,****Field Practice.**

Qualitative Analysis.

Stereotomy Problems and Platting.

VACATION WORK.

Memoir on some selected subject.

JUNIOR YEAR.

FIRST TERM.

Analytical Mechanics.**Physics.****Elective Study.****Drawing,****Field Practice.**

Topographical.

SECOND TERM.

Resistance of Materials.**Crystallography and Mineralogy.****Physics,****Drawing.**

Theory of Heat.

THIRD TERM.

Steam Engine.**Mineralogy,****Zoology.****Drawing,****Field Practice.**

Determinative.

Steam Boilers and Engines.

VACATION WORK.

Memoir on some selected subject.

SENIOR YEAR.

FIRST TERM.

Theory of Structures.**Psychology.****Geology,****Drawing,****Field Practice.**

Lithology, Structural and Dynamical Geology.

Bridges and Roofs.

SECOND TERM.

Hydraulics and Hydraulic Motors.**Geology,****Metallurgy,****Drawing,**

Stratigraphical Geology and Palaeontology.

Iron and Steel.

Hydraulic Machinery.

THIRD TERM.

| | |
|-----------------------------------|--------------------------------|
| Drainage and Water Supply, | Engineering. |
| Astronomy. | |
| Economic Geology, | Lectures. |
| Drawing, | Preparation of Thesis Drawing. |

Theses are required for graduation.

DEPARTMENT OF MECHANICAL ENGINEERING.

The requirements for admission to this course, if elected at the beginning of the Freshman year, are the same as those for entrance to the Freshman class of the General Science Course.

COURSE OF STUDY.

FRESHMAN YEAR.

The course of study for this year is the same as that for the Freshman year of the General Science Course, with the substitution of French for Anglo-Saxon during the first and second terms. Practice in the machine shop is commenced at once, under the direction of the Superintendent, and continued throughout the course. During the second and third terms students are instructed in the elements of free-hand drawing.

The course may be elected at the beginning of the Sophomore year, when the requirements for admission are the same as those for the same class in the General Science Course.

SOPHOMORE YEAR.

FIRST TERM.

| | |
|------------------------------|----------------------------|
| Descriptive Geometry. | |
| Analytical Geometry. | |
| Chemistry, | General. |
| Drawing, | Free-hand and Geometrical. |
| Shop Practice. | |

SECOND TERM.

| | |
|------------------------------|-----------------------------------|
| Calculus. | |
| Chemistry, | Lectures and Laboratory Practice. |
| Elements of Machines, | Lectures. |
| Drawing, | Elementary Mechanical. |
| Shop Practice. | |

THIRD TERM.

| | |
|------------------------------|-----------------------|
| Calculus. | |
| Elements of Machines, | Lectures. |
| Chemistry, | Qualitative Analysis. |

Drawing, - - - - - Mechanical.
Shop Practice.

VACATION WORK.

Memoir on some selected subject.

JUNIOR YEAR.

FIRST TERM.

Analytical Mechanics.
Elements of Machines.
Physics.
Shop Work and Drawing.

SECOND TERM.

Resistance of Materials.
Physics, Theory of Heat.
Crystallography and Mineralogy.
Shop Work and Drawing.

THIRD TERM.

Steam Engine.
Zoology.
Machinery and Mill Work.
Shop Work and Drawing.

VACATION WORK.

Memoir on some selected subject.

SENIOR YEAR.

FIRST TERM.

Steam Engine, Construction.
Psychology.
Drawing, Steam Engine.
Shop Work.

SECOND TERM.

Hydraulics and Hydraulic Motors, Theory and Construction.
Geology.
Metallurgy, Iron and Steel.
Shop Work and Drawing.

THIRD TERM.

Hydraulics and Hydraulic Motors, Construction.
Machine Designing.
Astronomy.
Drawing, Preparation of Drawings to accompany Thesis.
 Theses are required for graduation.

DEPARTMENT OF MINING AND METALLURGY.

The object of this department is to furnish instruction in those branches of science of which a thorough knowledge is essential to the intelligent mining engineer or metallurgist.

In view of the natural separation between the callings of the mining engineer and the metallurgist, and of the differences in the kind of training required for the two professions, it is deemed best to mark out two distinct courses for this department: the mining course having mathematics, theoretical and applied mechanics, physics, civil engineering, draughting, mineralogy, geology, and economic geology as its principal studies, while the metallurgical course deals chiefly with chemistry and its applications. With the present arrangement, an able and diligent student may readily accomplish both courses.

To enter these courses, a thorough knowledge of the studies pursued by the Freshman class of the General Science Course will be required. Students will, however, be received in special studies for which they are fitted; and attention is particularly drawn, in this connection, to the facilities for instruction in assaying.

COURSE OF STUDY.

FRESHMAN AND SOPHOMORE YEARS.

Same as in Civil Engineering Course.

JUNIOR YEAR.

| <i>Mining Engineering.</i> | <i>Metallurgy.</i> |
|----------------------------|-------------------------|
| FIRST TERM. | |
| Physics, | Deschanel and Lectures. |
| Chemistry, | Quantitative Analysis. |
| Analytical Mechanics. | Elective Study. |
| Drawing, | Topographical. |
| Field Practice. | |

SECOND TERM.

| | |
|--------------------------|---|
| Mineralogy, | Crystallography and General Principles. |
| Chemistry, | Quantitative Analysis. |
| Resistance of Materials. | |
| Drawing. | |

THIRD TERM.

| | |
|-------------|-----------------------------------|
| Mineralogy, | Determinative. |
| Assaying, | Lectures and Laboratory Practice. |
| Zoology. | |

| | |
|------------------------|------------------------|
| Steam Engines—Rankine. | Quantitative Analysis. |
| Drawing, | Furnaces, etc. |

SENIOR YEAR.

| | |
|---------------------|-------------|
| Mining Engineering. | Metallurgy. |
|---------------------|-------------|

FIRST TERM.

| | |
|--------------------|---|
| Geology, | Lithology, Structural and Dynamical Geology. |
| Metallurgy, | Refractory Materials, Fuels, Copper, Lead, etc. |
| Mental Philosophy. | |
| Drawing. | Quantitative Analysis. |
| Field Practice. | |

SECOND TERM.

| | |
|---------------------|---|
| Geology, | Stratigraphical Geology and Paleontology. |
| Metallurgy, | Iron and Steel. |
| Mining Engineering. | Quantitative Analysis. |
| Drawing. | |

THIRD TERM.

| | |
|-----------------------|------------------------|
| Economic Geology, | Lectures. |
| Mining Engineering. | Quantitative Analysis. |
| Railroad Engineering. | Elective Study. |
| Drawing. | |

COLLEGE OF LETTERS.

This includes two courses, in both of which Latin is a required study. The *Ancient Classical Course* also requires Greek; the *Modern Classical Course* has German or French in place of Greek.

In the Junior and Senior years there are but two required studies for each term; for the third study an election will be made, which will be for the whole year, unless otherwise specified.

ANCIENT CLASSICAL COURSE.

FRESHMAN YEAR.

FIRST TERM.

| | |
|--------------|---------------------------------|
| Latin, | Cicero de Amicitia. Livy begun. |
| Greek, | Homer's Odyssey. |
| Mathematics, | Higher Algebra. |

SECOND TERM.

| | |
|--------------|-----------------|
| Latin, | Livy. |
| Greek, | Herodotus. |
| Mathematics, | Solid Geometry. |

THIRD TERM.

| | |
|---------------------|-----------------------------------|
| Latin, | Livy. Twice a week. |
| Greek, | Thucydides. Three times a week. |
| Mathematics, | Plane and Spherical Trigonometry. |
| Botany. | |

Themes and declamations, and Latin and Greek composition throughout the year.

SOPHOMORE YEAR.

FIRST TERM.

| | |
|---------------------|--|
| Latin, | Horace. |
| Greek, | Philippics of Demosthenes. Goodwin's Moods and Tenses. |
| Mathematics, | Analytical Geometry and Mechanics. |

SECOND TERM.

| | |
|------------------|----------|
| Latin, | Tacitus. |
| Greek, | Tragedy. |
| Rhetoric. | |

THIRD TERM.

| | |
|-----------------------|------------------------|
| Latin, | The Andria of Terence. |
| Greek, | Lyric Poetry. |
| Early English. | |

Those who have stood as high as 85 in the languages during their Freshman year, will be allowed to substitute the mathematics, the zoology, or the botany of the General Science Course for one of their regular studies.

JUNIOR YEAR.

*Required Studies.***English Literature.**

FIRST TERM.

| | |
|-----------------|-------------------------|
| Physics, | Deschanel and Lectures. |
|-----------------|-------------------------|

SECOND TERM.

American History.**Chemistry,**

Lectures.

SECOND TERM.

Constitutional Law.**Zoology.**

THIRD TERM.

Elective Studies.

1. **Latin**, as a half study. *First term*, Cicero's letters; *Second term*, History of the Latin language; *Third term*, Pliny's letters.
2. **Greek**, as a half study. *First term*, Olynthiacs of Demosthenes, Greek Literature; *Second term*, Plato's *Phædo*; *Third term*, *Phædo* and Xenophon's *Symposium*.

3. **French.** *First term*, Keetel's Collegiate Course, Roman d'un jeune homme pauvre; *Second term*, Joyce's French Plays; *Third term*, La petite Fadette.
4. **German.** *First term*, Grammar and Reader; *Second term*, Iphigenie auf Tauris; *Third term*, Lessing's Laokoon.
5. **Norse.** *First term*, Peterson's Grammar, Anderson's Julegave; *Second term*, Björnson; *Third term*, Björnson, Lectures on Scandinavian Literature.
6. **History.** *First term*, Ancient History and Institutions; *Second term*, Medieval History; *Third term*, Modern History.
7. **English Literature.**
8. **Physics.**
*** As the elective courses in Physics and English literature do not begin until the second term, those who intend to elect either of these branches will choose some other elective the first term.
9. **Chemistry.** Those who elect this branch will take some other elective study the second term in place of the required chemistry of that term. They can also, if they choose, change to **Mineralogy** the second or third term, or both; and those who make this change will be allowed to elect the long course in geology during the Senior year.

SENIOR YEAR.

Required Studies.

FIRST TERM.

Psychology.

Political Economy and International Law.

SECOND TERM.

Ethics.

Logic,

Deductive.

THIRD TERM.

Astronomy.

During this term two studies are elective.

Elective Studies.

1. **Latin.** 2. **Greek.** 3. **French.** 4. **German.** 5. **English Literature.** The same as in the Junior year, the two classes reciting together.
6. **Icelandic.** *First Term*, Vigfusson & Powell's Grammar and Reader; *Second Term*. The same; *Third Term*, Elder Edda, Lectures on Scandinavian Literature.
7. **History.** *First Term*, Medieval Institutions; *Second Term*, The English Constitution; *Third Term*, History of Civilization.
8. **Physics.**
9. **Chemistry.**

10. Geology. This must be preceded by at least three terms of Chemistry and Mineralogy.

There are also the following special electives for the several terms:

First Term—Philosophy of Rhetoric.

Second Term—Geology. Short course.

Third Term—Esthetics and Natural Theology, Inductive Logic.

Second and Third Terms—Mineralogy.

MODERN CLASSICAL COURSE.

FRESHMAN YEAR.

FIRST TERM.

| | |
|---------------------|---------------------|
| Latin, | Cicero de Amicitia. |
| German, | Review and Reader. |
| Mathematics, | Higher Algebra. |

SECOND TERM.

| | |
|---------------------|---------------------|
| Latin, | Livy. |
| German, | Minna von Barnhelm. |
| Mathematics. | Solid Geometry. |

THIRD TERM.

| | |
|---------------------|-----------------------------------|
| Latin, | Livy. Three times a week. |
| German, | Wilhelm Tell. Twice a week. |
| Mathematics, | Plane and Spherical Trigonometry. |
| Botany. | |

Themes and declamations, and Latin and German composition throughout the year.

SOPHOMORE YEAR.

FIRST TERM.

| | |
|---------------------|--|
| Latin, | Horace. Twice a week. |
| German, | Hermann and Dorothea. Three times a week. |
| French, | Keetel's French Method. Roman d'un jeune homme pauvre. |
| Mathematics, | Analytical Geometry and Mechanics. |

SECOND TERM.

| | |
|------------------|--|
| Latin, | Horace. Three times a week. |
| German, | Maria Stuart and Compositions. Three times a week. |
| French, | |
| Rhetoric. | Joynes' French Plays. |

THIRD TERM.

| | |
|-----------------------|--|
| Latin, | Tacitus. Three times a week. |
| German, | Maria Stuart and Compositions. Twice a week. |
| French, | |
| Early English. | La petite Fadette. |

Those who have stood as high as 85 in the languages during their Freshman year, will be allowed to substitute the mathematics, the zoology, or the botany of the General Science Course for one of their regular studies.

JUNIOR YEAR.

Required Studies.

FIRST TERM.

English Literature.

Physics.

SECOND TERM.

American History.

Chemistry,

Lectures.

THIRD TERM.

Constitutional Law.

Zoology.

Elective Studies.

1. **Latin**, as a half study. *First term*, Cicero's Letters; *Second term*, History of the Latin Language; *Third term*, Pliny's Letters.
2. **French**, as a half study. Otto's Method, Cinq Mers.
3. **German**, as a half study. *First term*, Die Venus von Milo, Rafael und Michael Angelo; *Second term*, Die Kinder der Welt; *Third term*, the same.
4. **Norse**. *First term*, Peterson's Grammar, Anderson's Julegave; *Second term*, Björnson; *Third term*, Björnson, Lectures on Scandinavian Literature.
5. **History**. *First term*, Ancient History and Institutions; *Second term*, Medieval History; *Third term*, Modern History.
6. **English Literature.**
7. **Physics.**
. As the elective courses in Physics and English Literature do not begin until the second term, those who intend to elect either of these branches will choose some other elective for the first term.
8. **Chemistry**. Those who elect this branch will take some other elective study the second term in place of the required chemistry of that term. They can also, if they choose, change to **Mineralogy** the second or third term, or both; and those who make this change will be allowed to elect the long course in geology during the Senior year.

SENIOR YEAR.

Required Studies.

FIRST TERM.

Psychology.

Political Economy and International Law.

SECOND TERM.

Ethics.**Logic,**

Deductive.

THIRD TERM.

Astronomy.

During this term two studies are elective.

Elective Studies.

1. **Latin.** 2, **English Literature.** The same as in the Junior year, the two classes reciting together.
3. **French**, as a half study; *First term*, Howard's Aids to French Composition. Ursule Mirouet; *Second term*, Travailleurs de la Mer; *Third term*, the same.
4. **German**, as a half study; *First term*, Faust, *Second term*, Literaturgeschichte; *Third term*, the same.
5. **Icelandie.** *First term*, Vigfusson & Powell's Grammar and Reader; *Second term*, the same; *Third term*, Elder Edda, Lectures on Scandinavian Literature.
6. **History.** *First term*, Medieval Institutions; *Second term*, The English Constitution; *Third term*, History of Civilization.
7. **Physics.**
8. **Chemistry.**
9. **Geology.** This must be preceded by at least three terms of chemistry and mineralogy.

There are also the following special electives for the several terms:

First term—**Philosophy of Rhetoric**; **Geology**. Short course.*Third Term*—**Æsthetics and Natural Theology**, **Inductive Logic**.*Second and Third Terms*—**Mineralogy**.

SIX YEARS' COURSE.

Those who wish to devote to music or any similar pursuit the time for an entire study, will be allowed to take two studies at a time. For such students the Modern Classical Course has been extended so as to cover six years, as follows:

FRESHMAN YEAR.

First Term—Latin. German.*Second Term*—Latin. German.*Third Term*—Latin and German. Botany.

FIRST SOPHOMORE YEAR.

First Term—Latin and German. Higher Algebra.*Second Term*—Latin and German. Solid Geometry.*Third Term*—Latin and German. Trigonometry.

SECOND SOPHOMORE YEAR.

First Term—French. Mathematics and Mechanics.

Second Term—French. Rhetoric.

Third Term—French. Early English.

FIRST JUNIOR YEAR.

First Term—Physics. Elective Study.

Second Term—Chemistry. Elective Study.

Third Term—Zoology. Elective Study.

SECOND JUNIOR YEAR.

First Term—English Literature. Elective Study.

Second Term—American History. Elective Study.

Third Term—Constitutional Law. Elective Study.

SENIOR YEAR.

First Term—Psychology. Political Economy, etc.

Second Term—Ethics. Logic.

Third Term—Astronomy. Elective Study.

PREPARATORY GREEK CLASS.

FIRST TERM.

| | |
|--------|---|
| Greek, | White's Lessons and Jones' Composition (twice a day). |
| Latin, | Cicero's Select Orations. Allen's Composition. |

SECOND TERM.

| | |
|--------|--|
| Greek, | Xenophon's Anabasis and Jones' Composition. |
| Latin, | Vergil's <i>Aeneid</i> . Latin Prosody. Composition. |

THIRD TERM.

| | |
|--------|---|
| Greek, | Xenophon's Anabasis and Homer's Iliad. Composition. |
| Latin, | Vergil's <i>Aeneid</i> . Composition. |

TIME TABLE—FALL TERM, 1881.

| | 9-10. | 10-11. | 11-12. | 12-1. | P. M. |
|----------------------|--|--|--|--|----------------------|
| SENIOR CLASS. . . . | Political Economy. | Norse. History. German, Tu., Th. French, M., W., F. | Psychology. | † German, } For † French, } beginners. Rhetoric. Latin, M., W., F. Greek, Tu., Th. | Physics. Geology. |
| JUNIOR CLASS. . . . | English Literature. Analytical Mechanics. | Physics. | French, Tu., Th. German, M., W., F. History. Norse. | Greek, Tu., Th. Latin, M., W., F. † German, } For † French, } beginners. Descriptive Geometry. | |
| SOPHOMORE CLASS. . . | † Latin. ‡ French. | * Anal. Geom. † Greek. ‡ German, M., W., F. | † Math. and Mech. * Rhetoric. ‡ Latin, Tu., Th. | ‡ Math. and Mech. | Zoology. Botany. |
| FRESHMAN CLASS. . . | ‡ German. | * German. † Mathematics. ‡ Latin. | * Mathematics. † Greek. | * Anglo-Saxon. † Latin. ‡ Mathematics. | |

* General Science Course.

† Ancient Classical Course.

‡ Modern Classical Course.

TIME TABLE—WINTER TERM, 1882.

| | 9-10. | 10-11. | 11-12. | 12-1. | P. M. |
|--------------------|-----------------------|--|---|---|-----------------------|
| SENIOR CLASS..... | Logic. | German, M., W., F. French, Tu., Th. Norse. History. | | Geology. Ethics. | Physics. Chemistry |
| JUNIOR CLASS..... | American History. | Chemistry. (Short Course.) | French, M., W., F. German, Tu., Th. Norse. History. | Latin, Tu., Th. Greek, M., W., F. + French. + German. English Literature. | Chemistry. |
| SOPHOMORE CLASS... | † Latin. ‡ French. | * Calculus. † Greek. † Rhetoric. | * Mechanics. † Rhetoric. ‡ Latin, M., W., F. ‡ German, Tu., Th., | Physiology. | Zoology. |
| FRESHMAN CLASS... | † Greek. ‡ German. | * German † Latin. ‡ Mathematics. | * Anglo-Saxon. † Mathematics. | ‡ Latin. * Mathematics. | |

* General Science Course.

† Ancient Classical Course.

‡ Modern Classical Course.

TIME TABLE—SPRING TERM, 1882.

| | 8-9. | 9-10. | 10-11. | 11-12. | 12-1. | P. M. |
|--------------------|---|--|--|---|------------------------|--|
| SENIOR CLASS. | Astronomy. | French, Tu., Th. German, M., W., F. Norse. History. | Æsthetics. | Geology. Logic. English Literature. Latin, Tu., Th. Greek, M., W., F. | † German. † French. | Chemistry. Physics. |
| JUNIOR CLASS..... | Zoology. (Short Course.) | | Mineralogy. | Physics. | | |
| | | Constitutional Law. | French, M., W., F. German, Tu., Th. History. Norse. | Latin, Tu., Th. Greek, M., W., F. English Literature. | † French. † German. | Chemistry. |
| SOPHOMORE CLASS. | * Zoology. (Short Course.) † Latin. | ‡ English. † Greek. | * Calculus. ‡ Latin, M., W., F. ‡ German, Tu., Th. † English. | ‡ French. | | Zoology. Vertebrate Anatomy Botany. |
| FRESHMAN CLASS.... | † Mathematics. ‡ Latin, Tu., Th. ‡ German, M., W., F. | * Mathematics. †‡ Botany. | ‡ Mathematics. * Botany. | * German. † Latin, Tu., Th. † Greek, M., W., F. | | |

* General Science Course.

† Ancient Classical Course.

‡ Modern Classical Course.

DEPARTMENTS OF STUDY.

PHILOSOPHY—PRESIDENT BASCOM—

Five recitations, of a term each, are devoted to philosophy, to wit: one to deductive and one to inductive logic; and three to psychology, ethics, æsthetics, and natural theology. The time is abundant and the course correspondingly complete.

In psychology the president uses the new edition of his own work. The aim of the recitation is to give the present conclusions on living questions in philosophy, and to prepare the mind for the slow formation of an opinion concerning open points, and for the clear apprehension of settled facts. While the text-book guides and steadies the discussion, and gives a frame-work of thought for the memory, much matter is incidentally introduced for the fuller presentation of opposing views, and the further enforcement of those offered. In the course of the recitations, subjects in philosophy are assigned to be discussed historically in essays before the class. The library is well provided with works of philosophy, and the students are urged to read systematically in connection with the work in the recitation room. Leading historical facts in philosophy are brought before the class by lectures, and at least a partial knowledge of influential systems, like that of Spencer, secured. Free discussion and inquiry are had in the class room. The effort is not so much to control belief, as to secure its best conditions. The recitation is ordered in reference to the present state of philosophy and existing facts are made to run back into the history of philosophy. The opposite method requires more time, and has, for the beginner, less interest. On the whole, we regard the proper starting point of inquiry to be the facts before us. Ethics follow psychology, and natural theology and æsthetics follow ethics. While the hard work is done, and the leading principles are established in psychology, essentially the same method is pursued in each of these branches. In ethics and natural theology the ruling idea is freedom of discussion, with a full presentation of opposing views. We believe this to be the best and safest way for the formation of firm yet flexible opinions. Æsthetics is taught with extended illustrations, and the purpose is to bring delicacy to the perceptions and culture to the feelings.

LOGIC—PROFESSOR PARKINSON—

The course in logic extends through the second and third terms of the Senior year. The first of these terms is given to deductive logic, chiefly, and the last to inductive. The deductive is a required study in the Col-

lege of Letters, and an elective in the College of Arts. The inductive is an elective in both colleges.

TEXT-BOOKS—Jevons' Deductive Logic; Fowler's Inductive Logic.

HISTORY—PROFESSOR ALLEN—

All persons entering the University are examined in United States history. Candidates for the Freshman Class of the College of Letters are examined also in ancient history and geography, and the history of England.

American history is a required study for the classical students in the second term of the Junior year. There is also an elective course in history for the Junior and Senior years. The course for the Junior year is dynastic and territorial history; for the Senior year the history of institutions and of civilization. The work is arranged as follows:

JUNIOR YEAR.

First Term—Ancient History.

Second Term—Medieval History.

Third Term—Modern History.

SENIOR YEAR.

First Term—Medieval Institutions.

Second Term—The English Constitution.

Third Term—History of Civilization.

In the first term of the Junior year the history of ancient institutions is also studied. All the classes in history are elective for the scientific and special students.

The method of instruction, wherever possible, is by the assignment of special topics, to be looked up by the student in books of reference, and presented orally to the class; in some departments of work, by lectures. In most cases a text-book is made the basis of instruction; sometimes written essays are required of the members of the class; and courses of historical reading are laid out for the several members. Historical charts and maps are constantly used.

TEXT-BOOKS—Labberton's Historical Atlas; Leighton's History of Rome; Hallam's Middle Ages; Michelet's Modern History; Smith's History of English Institutions; Guizot's History of Civilization.

CIVIL POLITY AND POLITICAL ECONOMY—PROFESSOR PARKINSON.

CONSTITUTIONAL LAW.—At the beginning of the third term of the Junior year a short course of lectures is given upon general constitutional law, dwelling more especially upon the English constitution—its gradual formation and distinguishing characteristics. It is aimed in these lectures to prepare the way for the study of the constitution of the United States, which subject is taken up at their conclusion and continued, by recitation or lecture daily, through the term. The constitution is investigated in no party spirit, but in that of free inquiry. Special attention is given to

important cases involving vital principles of constitutional law, and to the adjudications upon them by the highest judicial tribunals. It is designed in the study of the constitution and throughout this department, to give instruction that shall be practical in the highest sense of the term, and which cannot but be of immediate service to that large class of graduates who pass at once from the academic to the law department of the University. Constitutional law, during the third term of the Junior year, is a required study for the students in the College of Letters and an elective for those in the General Science Course, College of Arts. It is also an elective study, during the third term of the Senior year, for students in the General Science Course.

POLITICAL ECONOMY.—This subject is taken up at the beginning of the Senior year and continued, with four exercises a week, to the close of the first term. It is taught with the aid of an appropriate text book and works of reference, supplemented largely by lectures and discussions upon the more important topics. It is designed to treat the science, not as an isolated one, but as intimately connected with that of government, and as closely bearing upon the welfare and interdependence of nations as well as of individuals.

INTERNATIONAL LAW.—This subject is at present taught wholly by lectures. It extends, one lecture a week, over the first term of the Senior year. The aim is to present the outlines of the science in as complete a manner as possible in the time allotted, and to note any modifications or advances made from time to time in the recognized law of nations. Both political economy and international law are required of students in the College of Letters, but are elective for those in the College of Arts.

TEXT-BOOKS.—Cooley's Constitutional Law; Wayland's Political Economy (revised by Pres. Chapin).

GREEK—PROFESSOR KERR, assisted by MR. WILLIAMS—

The study of Greek extends through the whole of the Ancient Classical Course, being elective during the Junior and Senior years. Preparatory to admission to the Freshman class the student should be well grounded in the elements of Greek grammar, and should be able to write Greek with the accents, in addition to reading the required amount of the *Anabasis* and the *Iliad*.

FRESHMAN CLASS.—The course for the first college year includes a study of the Homeric Poems, with reference to a critical knowledge of the Epic dialect, and the interpretation of the Greek Mythology. Half of the Eighth Book of Herodotus is read as a means of teaching the New Ionic and as a basis of instruction in the Greek historians. Sixty chapters from the First Book of Thucydides give drill in elliptical and difficult constructions, and serve as an introduction to the history and literature of the age of Pericles. The class also read selections from Xenophon's *Memorabilia*, and from the *Dialogues* of Lucian, with frequent exercises in writing prose.

SOPHOMORE CLASS.—The Sophomore year is given to the study of Greek oratory, tragedy, and lyric poetry. The Philippics of Demosthenes, or their equivalent, are read and analyzed, and are illustrated by instruction in Athenian politics and Grecian antiquities. The work in dramatic and lyric poetry consists in the reading and analysis of the Medea of Euripides and selections from the Greek Anthology, or their equivalents, accompanied by lectures upon the departments of literature from which the year's reading is taken.

The study of the difficult principles of Greek syntax is continued during the year, but only as subordinate and incidental to the study of the authors themselves.

JUNIOR AND SENIOR CLASSES.—The last two years are given to Greek philosophy, dramatic poetry, and oratory. The course of reading is in Plato, Sophocles, Euripides and Demosthenes. The object of this elective course is, by means of reading and lectures, to give the student a comprehensive knowledge of Greek literature, and show him the power of the language as a medium of thought.

Resident graduates and special students in Greek may read with the professor from authors not named in the course.

TEXT-BOOKS.—Goodwin's Greek Grammar; Goodwin's Greek Moods and Tenses; White's Greek Lessons; Jones' Greek Prose Composition; Xenophon's *Anabasis*, Goodwin and White; Homer's *Iliad*, Sidgwick or Boise; Boise's Exercises in Greek Syntax; Boise and Freeman's Selections from Greek Authors; Tarbell's Philippics of Demosthenes; F. D. Allen's *Medea* of Euripides; Tyler's Greek Lyric Poets, and *Olynthiacs* of Demosthenes; Flagg's Hellenic Orations of Demosthenes; D'Ooge's Demosthenes on the Crown; Smead's *Antigone* of Sophocles; White's *Oedipus Tyrannus* of Sophocles; Woolsey's *Alcestis* of Euripides; Wi-nans' Xenophon's *Symposium*; Wagner's *Plato's Apology* and *Crito* and *Plato's Phaedo*; Tyler and Hackett's *Plutarch's De sera numinis vindicta*; Jebb's Greek Literature.

LATIN—PROFESSOR ALLEN, assisted by MR. HERITAGE—

The required course in Latin consists of six terms, in one of which (the third term of the Freshman year) Latin occupies the place of a half study, alternating with Greek (Modern Classical, German). In the Sophomore year also Latin is a half study for the Modern Classical students, alternating with German. During the Junior and Senior years Latin is elective as a half study.

During the Freshman year the chief object is to enlarge and confirm the knowledge of the language by constant grammatical drill, and by weekly exercises in writing Latin. In the following years it is the intention, without neglecting grammatical training, to pay special attention to the subject-matter of the books read, and their place in the history of literature.

As a course in Roman literature, the work of these six terms—taken

in connection with the books read before entering—is designed to embrace all the leading classes of composition, and most of the authors of first rank.

The work of the Freshman year is: first, one of Cicero's lesser works—for the present year, his "Laelius" (*De Amicitia*); for the rest of the year, Livy. There are weekly exercises in composition. The authors read in the Sophomore year of the Ancient Classical course are: first term, Horace, second term, Tacitus (the present year his smaller works); third term, Plautus or Terence (the present year, the "Andria" of Terence). In the Modern Classical course (as a half study), Horace is read two terms, and Tacitus the third term. At the close of the Sophomore year there is a written examination, designed to test the student's practical acquaintance with the language.

The elective course in Latin covers two years; but only one year's course is taken at a time, as the Seniors and Juniors recite together. The present year's course consists of Latin prose (selections from Cicero's and Pliny's letters), and the history of the Latin language. The course last year consisted of selections from Virgil and the first book of Cicero's *Tusculans*, in connection with a course in Roman literature.

TEXT-BOOKS.—For the several authors no special editions are required: Allen and Greenough's Latin Grammar; Allen's Latin Composition; F. D. Allen's Remnants of Early Latin; Bender's History of Roman Literature.

FRENCH—PROFESSOR OWEN, assisted by MISS DODGE—

Students in the Modern Classical Course are required to pursue the study of French during the Sophomore year, reciting once daily. Students in the General Science Course can also elect the study during the same period. As many students desire to attain merely a reading knowledge of the language, the aim of instruction during the Sophomore year is to meet this demand; at the end of this time students are expected to read with sufficient ease and accuracy to use the language in the prosecution of other studies. At the same time sufficient attention is paid to the pronunciation of the language and to understanding it when spoken, to place the student at the end of the year in a condition to profit by an advanced course. The syntax and idioms of the language are explained in the recitation, which is upon authors selected for the difficulty of their style. At the same time a good vocabulary is acquired by reading for examination easy French, upon which notes are given as seems advisable.

The advanced course embraces the Junior and Senior years, occupying an hour every other day, and is open to general election. In this the student will be expected to read without assistance and pass examination upon a large amount of simple French; lectures will be given upon the etymology of the French language, and its relation to the Latin and Romance languages; but the main effort of the course will be to give the student the power of conversing in the language and to acquaint him

with the history of its literature, and the bearings of the same on the literature of modern times. The medium of instruction in this course will be the French language. Students electing this course are expected to pursue it until the end of the Senior year.

An opportunity will also be given during the Junior and Senior years to students of the Ancient Classical Course to obtain a reading knowledge of the language.

TEXT-BOOKS.—Keetel's French Course; Howard's Aids to French Composition; Joyne's French Plays; *La Petite Fadette*; *Cinq Mars*; Ursule Mirouet; *Travailleurs de la Mer*; *Roman d'un jeune homme pauvre*.

GERMAN—PROFESSOR ROSENSTENGEL, assisted by MISS CHYNOWETH—

German is taught in the General Science, in the Ancient Classical, and in the Modern Classical Courses.

For admission to the Freshman class both General Science and Modern Classical Courses, candidates must be prepared to pass a thorough examination on German Grammar, and on twenty German reading lessons (13 pages); Sheldon's Short German Grammar (Ginn, Heath & Co., Boston, 70 cts.), and Rosenstengel's German Reader for High Schools (G. J. Jones & Co., St. Louis, Mo., 75 cts.), are recommended.

In the General Science Course German is a required study during the Freshman year. The text-books will be: Rosenstengel's Reader, Heyse's *Die Einsamen* (H. Holt & Co., New York, 25 cts.), and Buchheim's *Schiller's Wilhelm Tell* (Macmillan, London, 80 cts.).

In the Ancient Classical Course German is a full elective study during the Junior or Senior year. The following books will be used: Sheldon's Grammar, Rosenstengel's Reader, and Bushmann's Lessing's *Laokoon* (Schöening, Paderborn, 50 cts.).

In the Modern Classical Course German is pursued for four and a half terms as a required, and for three terms as an elective study. The object of this course is to enable students not only to read and write but also to speak German. In the Senior class lectures on German literature in German will form part of the work. The following books will be used: Rosenstengel's Reader, Buchheim's Lessing's *Minna von Barnhelm* (Macmillan, London, 80 cts.*); Buchheim's *Schiller's Wilhelm Tell*, Hart's *Goethe's Hermann and Dorothea* (Putnam, New York, \$1.00); Schiller's *Maria Stuart*, Grimm's *Die Venus von Milo*, *Rafael und Michael Angelo* (H. Holt & Co., New York); Heyse's *Kinder der Welt* (G. Muro, New York); Hart's *Goethe's Faust* (Putnam, New York); and Klemm's *Geschichte der Deutschen Literatur* (H. Holt & Co., New York).

To German-Americans and advanced students German grammar and stylistic and Middle-High German is offered as an elective study. Rosenstengel's *Hilfs und Uebungsbuch beim Unterricht in der Deutschen*

*The editions of Hempel, Berlin (price 25 to 35 cts.), or Reclam, Leipzig (15 to 25 cts.), may be substituted for the German classics.

Sprache (C. Thitter, St. Louis, Mo.), and H. Paul's *Mittelhoch deutscher Grammatik* (Niemeyer, Halle, 50 cts.), will be used.

SCANDINAVIAN LANGUAGES—PROFESSOR ANDERSON—

The Scandinavian languages are offered as optional studies in the Freshman and Sophomore years, and as elective in the Junior year.

A part of the time in all the classes in the Scandinavian languages is devoted to lectures on Scandinavian history, literature, and mythology.

TEXT-BOOKS.—In Modern Norse—Peterson's Norwegian-Danish Grammar and Reader. After that selections in prose and poetry are read. In Old Norse or Icelandic—Icelandic Prose Reader with Notes, Grammar and Glossary by Dr. Gudbrand Vigfusson and F. York Powell, Oxford. When this is completed the class translate selections from the Eddas and Sagas.

ENGLISH LANGUAGE AND LITERATURE—PROFESSOR FREEMAN—

FRESHMAN YEAR.—The English language is studied in the order of its development, beginning in the first term with the First English or Anglo-Saxon (General Science Course). This study is pursued not only for the sake of an acquaintance with the language of our fathers, but also on account of the light it throws upon the forms and constructions of the language of to-day. The text-book will be Sweet's Anglo-Saxon Reader.

SOPHOMORE YEAR.—In the third term Early Modern English (of the 14th century) is studied. The text-books used are the Prologue to the Canterbury Tales and the Knight's Tale (Carpenter's Ed.), and other works of Chaucer (Morris's and Skeat's Eds.). Three points are kept prominently in view: 1st, the grammatical construction—each sentence being subjected to a thorough analysis; 2d, the derivation and use of words, the aim being to show the origin, relation, the former and the present meaning of words, and thus to lead the student to greater accuracy and elegance in the use of the mother tongue; 3d, the character of the text as illustrating the principles of literary composition.

JUNIOR YEAR.—In the first term English literature is taught by the use of a Manual as a text-book, supplemented by illustrative readings and lectures. The aims in view are that the student may learn: 1st, what composes the body of English literature; 2d, its literary character and value; 3d, the peculiar social and moral forces that produced and developed it.

Elective courses will be offered in advanced Anglo-Saxon (Beowulf, Cædmon, March's Anglo-Saxon Grammar), and Early English (Morris's Specimens of Early English, the Early English Text Society's Publications, Mætner's Grammar),

There will be offered to Seniors, Juniors, and special students who have taken at least one course in English literature, electives as follows:

Winter Term, 1882—The direct study of ten English masterpieces, from Sir Thomas More's *Utopia* to Tennyson's *Princess*.

Spring Term, 1882—A course in English oratory, or in representative American prose writers.

Winter Term, 1883—Twelve plays of Shakespeare.

Spring Term, 1883—English epics and lyrics.

In the last four courses the pupils will study privately under direction of the professor, and will present before the class the results of their study in the form of essays and written criticisms, as well as oral discussions.

RHETORIC AND ORATORY—PROFESSOR FRANKENBURGER—

In the Senior year the philosophy of rhetoric is an elective study in all the courses. The text-book is Day's Art of Discourse.

In the fall term of the Sophomore year, of the General Science Course, rhetoric is a required study for the full term of fifteen weeks. The text-books are Hill's Principles of Rhetoric, and Abbott's How to Write Clearly.

The classical Sophomores study rhetoric during the winter term of twelve weeks, using the same text-books as those used by the scientific division.

Each member of the Freshman and Sophomore classes is required to have six essays and six declamations during the year. Private rehearsals precede public declamation, and each student has personal criticism passed upon his essay, after it has been read to the class.

Each member of the Junior and Senior classes has five essays and one chapel-stage oration. Class debates frequently take the place of essays.

In addition to the above class exercises there are four rhetorical exercises in each term, at which all the students in the university are present. At this exercise are given those chapel-stage orations of the Juniors and Seniors, and those essays and declamations of the Freshmen and Sophomores which possess special merit.

Students write a portion of the time upon assigned themes.

Instruction is given in elocution once a week to the Freshman class. In the Senior, Junior, and Sophomore years, elocution is optional. To those who desire it, instruction is given once a week.

This department is supplemented by work in the Literary Societies. These are six in number, two supported by the young women and four by the young men.

MATHEMATICS—DR. STERLING, assisted by MR. VANVELZER and MRS. CARSON—

For admission to the Freshman class in mathematics, candidates must, in addition to arithmetic, be prepared to pass a thorough examination on higher algebra, through quadratic equations, and, after the present year, on the whole of geometry, plane and solid.

The full course in mathematics is as follows:

FRESHMAN YEAR.

First Term—Higher Algebra completed.

Second Term—Solid Geometry—Plane Trigonometry begun.

Third Term—Plane and Spherical Trigonometry.

SOPHOMORE YEAR.

First Term—Analytical Geometry.

Second Term—Calculus.

Third Term—Calculus.

To students who elect mathematics in the Junior and Senior years, and to post-graduates and special students, instruction will be given in the more advanced portions of the studies of the course, and also, whenever desired, in any of the following subjects:

Differential Equations, Spherical Harmonics, Elliptic Functions, Theory of Functions, Theory of Numbers, Quantics and Quaternions.

Students in the General Science Course who elect calculus only, must pursue the study two terms and take analytical mechanics the first term of the Junior year. Those who elect both mechanics and calculus may omit the analytical mechanics, but must pursue the calculus two terms.

Students in either of the classical courses, who have stood as high as 85 in the languages, may elect the calculus of the General Science Course, in place of one of their regular studies.

The instruction in this department aims to secure a thorough acquaintance with the elementary principles of mathematics and facility in mathematical operations, and to give the student such exercises in the application of principles as will prepare him to enter upon the study of the sciences.

ASTRONOMY—PROFESSOR HOLDEN—

Instruction in theoretical and practical astronomy will be given throughout the year to students whose attainments in mathematics are sufficient to enable them to proceed profitably in these higher studies. During the spring term instruction in descriptive astronomy is given to the Senior class by lectures and recitations daily.

PHYSICS—DR. DAVIES—

The instruction in physics is given by lectures and experiments during the Junior year. The text-book used is Deschanel's Elements of Natural Philosophy. This is exclusive of the time given to abstract dynamics taught by the Professor of Civil Engineering.

Students whose average standing in the general course does not fall below 85, are allowed to take advanced studies in physics. These consist of electrical and other measurements as laid down in Kohlrausch's "Physical Measurements" and Latimer Clark's "Electrical Measurements." As the work to be done in practical physics presupposes a good knowledge of theory, the following works are studied: Merriman's Method

of Least Squares; Airy's Treatise on Light and Sound; Cumming's Treatise on Heat, Electricity, and Magnetism; Watson's Kinetic Theory of Gases; Lord Rayleigh's Treatises on Sound; Boole's Differential Equations; and Todhunter's Spherical Harmonics. The theory of Determinants is studied as far as it may be necessary, in understanding any of the above works.

CHEMISTRY—PROFESSOR DANIELLS—

MR. VANHISE in charge of qualitative laboratory.

Long Course—This course consists of a daily exercise throughout the year, and may be continued two years at the option of the student. The course is intended to be so thorough as to give an accurate training in the science which will be of value for its own sake, while, at the same time, the design is to make it so practical that it shall be of special service to those intending to become physicians, engineers, metallurgists, or practical chemists.

DESCRIPTIVE CHEMISTRY.—Instruction in inorganic chemistry is given by lectures, with free use of the text-book, and by laboratory practice during the fall term. The lectures are illustrated by an elaborate series of experiments. During the spring term a course of lectures is given on chemical philosophy, and the chemistry of the carbon compounds.

QUALITATIVE ANALYSIS is begun on the completion of the lectures on inorganic chemistry. The course includes the analysis of fifty solid substances containing not more than one base and one acid each, and of forty complex substances, most of which are ores, minerals, or substances used in the arts. In the analysis of complex compounds, the separation, as well as the detection of the different basis and acids present is required. Laboratory work is accompanied by frequent lectures and reviews. Exercises in stoichiometry and chemical problems are required throughout the year.

QUANTITATIVE ANALYSIS.—Students are taken into the quantitative laboratory as soon as they have completed the course in qualitative analysis. Substances of known composition are first analyzed, that the accuracy of each student's work may be tested by comparing his results with the known percentages. When skill and accuracy in manipulation sufficient to secure correct results have been acquired, substances more difficult of analysis are given, as minerals, ores, crude metals, fertilizers, commercial and technical products. Each student makes duplicate analysis of every substance, which with those made by other students, verify the accuracy of his work. Volumetric analysis is also taught, and volumetric methods are used in the laboratory when they are more expeditious or more accurate.

Students intending to become physicians, will, upon completing the course in qualitative analysis, be given special facilities for urine analysis, the detection of poisons, and the analysis of food, drugs, etc.

To those desiring to become teachers of science, and who have

completed the course in qualitative analysis, an advanced course in experimental chemistry will be given.

The text-books in this course are, Thorpe's Inorganic Chemistry, 2 vols.; Fresenius' Qualitative Chemical Analysis; and Fresenius' Quantitative Chemical Analysis.

Both the qualitative and quantitative laboratories are large, conveniently arranged, well ventilated and well lighted, supplied with gas, running water, and all necessary apparatus and fixtures. Each student is provided with a convenient table, shelves, drawers, and cupboard, and is supplied with a complete outfit of apparatus, and chemical reagents.

Short Course.—This course consists of twelve week's instruction, principally by lectures, in inorganic and organic chemistry. It is intended only to give an outline of the science, with some knowledge of the general principles governing chemical changes. The text-book used is Roscoe's Lessons in Elementary Chemistry.

MILITARY SCIENCE AND TACTICS—CAPTAIN KING—

All able-bodied male students are required during the first two years of the course to attend such military drills and exercises as are prescribed by the Faculty. They are organized as the University Battalion, and, when on military duty, are required to wear a uniform. The prescribed uniform is less expensive than civilian dress, and can be worn with propriety at all other times.

The course in military science and tactics is as follows :

First Year.—Practical instruction in the schools of the soldier, company and battalion, United States infantry tactics, military gymnastics and bayonet exercise.

Second Year.—Instruction (practical and theoretical) in school of the company and battalion, and evolutions of the line, military reconnaissance and surveying, field fortifications, customs of service, orders and correspondence, and in military law and court martial.

Under the laws of the General Government and of the State of Wisconsin, instruction in military tactics is obligatory. In the organization of the Battalion for instruction in infantry tactics the students are at present divided into two companies officered by those young men who have shown themselves to be most prompt and faithful in the discharge of their duties and who are conspicuous for soldierly bearing. In the annual Catalogue the roster of officers and non-commissioned officers of the battalion, taken from the rolls of the previous Spring term, will hereafter be published in full.

ROSTER OF UNIVERSITY BATTALION, JUNE, 1881.

Major and Comandant—CHARLES KING, Captain U. S. Army.

Lieutenant and Adjutant—CHARLES D. FRATT.

Sergeant Major—LEANDER F. FRISBY, JR.

Quartermaster Sergeant—CLARENCE J. HICKS.

COMPANY "A"

Captain—WALTER B. PEARSON.
 1st. Lieut.—B. B. CARTER.
 2d Lieut.—EDWARD G. MCGILTON.
 1st. Sergeant—ROLLIN B. MALLORY.
 Sergeant—CHARLES R. BOARDMAN.
 Sergeant—MYRON T. WILDISH.
 Sergeant—HENRY A. GRANT.
 Sergeant—CONRAD T. SANDERS.
 Corporal—HARRY L. MOSELEY.
 Corporal—JAMES J. MORGAN.
 Corporal—WILLIS H. MINER.
 Corporal—BENJAMIN G. TREAT.

COMPANY "B"

Captain—ARCHIBALD CHURCH.
 1st. Lieut.—FRANK W. JOHNSTON.
 2d Lieut.—FRANK H. FOSTER.
 1st. Sergeant—Wm. E. AITCHISON.
 Sergeant—JOHN M. CLIFFORD.
 Sergeant—LOREN R. COOMBS.
 Sergeant—WM. H. CAMP.

Corporal—MARSHALL M. PARKINSON.
 Corporal—RUGGLES S. ROCKWELL.
 Corporal—WILLIAM B. MONROE.
 Corporal—JOHN D. DUNWIDDIE

At the close of the Spring term on the decision of the following named judges: Lieut.-Colonel Chandler P. Chapman, W. N. G., Captain J. S. McNaught, 20th Infantry U. S. Army, and Professor Allan D. Conover, prizes were presented by Adjutant-General Edwin E. Bryant, to the following students for excellence in the school of the soldier:

First Battalion Prize—CORPORAL J. J. MORGAN.

Second Battalion Prize—SERGEANT-MAJOR, L. F. FRISBY, JR.

Corporals Morgan and Monroe are the holders of the prizes of Companies "A" and "B" respectively.

MINERALOGY AND GEOLOGY—DR. IRVING—

The course in these studies for students of the General Science and Technical Courses covers five successive terms of daily exercises in the class room and laboratory.

CRYSTALLOGRAPHY is taught during the winter term of the Junior year. Dana's Text-Book of Mineralogy serves as the ground-work of the course, which is fully illustrated by collections of glass and wooden crystal-models, and a large series of wall charts showing the various crystalline form and other combinations. Students are required to be able to determine the forms at sight, and to apply to them the ordinary systems of notations, and, on completion of the course, to have at command a working knowledge of the subject sufficient for application in the study of optical mineralogy and microscopic lithology.

MINERALOGY follows directly upon the crystallography, physical mineralogy being first taken up. Especial attention is given to the optical properties of minerals, which are illustrated by lantern projections. Towards the latter part of the term, the class passes to the mineralogical laboratory. Here, after an extended course in blow-pipe analysis, they are given minerals to determine by the ordinary blow-pipe and physical tests, Brush's Determinative Mineralogy being used in connection with the Descriptive Mineralogy of Dana's Text-Book. This work extends through the greater part of the spring term, towards the end of which conferences are held in which typical specimens are examined in connec-

tion with the book descriptions. Two hours' daily attendance are required in the laboratory. The final examination on the studies of the two terms is conducted by requiring the student to name, at sight, and answer any questions with regard to the physical and chemical properties of, a series of specimens which he has not before seen, and to determine by the ordinary tests, in the presence of the examiner, other more difficult specimens. A collection of about 600 minerals is deposited in the laboratory, and is constantly accessible to the student. A larger collection is placed in the mineralogical cabinet.

GEOLOGY is began in the fall term of the Senior year with the study of lithology, the instruction being by lecture, microscopic lantern demonstrations, and microscopic practice in the laboratory. A full discussion of the microscopic characters of the chief rock-forming minerals is given, and is followed by descriptions of the various kinds of rocks. Structural geology follows next, occupying most of the remainder of the fall term. Dynamical geology and historical geology then follow, theory being now freely introduced. The instruction here is in part by lecture, and in part by recitation. Opportunity for an excursion of several days' duration is offered to each class in the spring term.

APPLIED OR ECONOMIC GEOLOGY is taught in a series of about fifty lectures during the spring term of the Senior year. The course includes a discussion of the nature and origin of ore deposits in general; the composition, properties, modes of occurrence, geological and geographical distribution of the ores of each of the metals; the same with regard to each of the non-metallic useful substances; mineral springs; artesian wells and water supply; and the origin and geological relations of soils.

TEXT-BOOKS.—Nicholson's Ancient Life History of the Earth, Dana's Text-Book of Mineralogy, Brush's Blow-Pipe Analysis, LeContes' Elements of Geology.

BOTANY—PROFESSOR HENRY—

The first course in botany will be given to the Modern Classical and Scientific Freshmen during the third term. The first part of the term is devoted to lectures upon vegetable anatomy and physiology. To illustrate these lectures, the life history of certain plants, grading from the lowest forms up to the highest, will be considered. Later in the term, upon the appearance of the spring flowers, structural botany will be reviewed and instruction given in analysis of common plants. At the close of the term the students will hand in an herbarium of fifty specimens and will pass an examination in analysis of flowers in addition to that on the lectures.

Two optional courses are given during the first term. The first of these is upon fall flowers—most of the time being devoted to the order *Compositae*. This course closes in about six weeks, or may be continued by a study of our native ferns or grasses, at the option of the student.

The second course is devoted to a study of the lower forms of plant life

by aid of the microscope and lectures. The time devoted to the various groups depends somewhat upon the material at hand for study, but as nearly as possible three weeks, or thirty hours will be given to each of the subjects, Algae, Mosses, and Ferns, and six weeks or sixty hours to Fungi. In this course the subject will be taught as nearly as possible in the order presented by Bessey in his recent work on botany.

The collection of botanical specimens consists of the local herbarium which contains the plants about Madison, and the Lapham herbarium, which contains 20,000 specimens. This large collection was purchased by the State, and is deposited with the University. It is now being carefully mounted.

TEXT-BOOKS.—Gray's Manual and Lessons; Bessey's Botany.

ZOOLOGY—DR. BIRGE—

The short course in zoology consists of one term's work, required of all students who do not take the long course. It is given in the third term of the year to the Juniors of the classical courses and the Sophomores of the scientific and engineering courses.

The long course in zoology begins, regularly, with the first term of the Sophomore year. The course consists of laboratory work and lectures, the former giving a practical knowledge of comparative anatomy, and the latter treating especially of embryology and classification. During the first term the Protozoa, Cœlentrata and Vermes are studied, and, during the second term, the Mollusca and Arthropoda. With the beginning of the third term the course divides; the student may elect the study for one term only, and will in that case devote the time to the study of Vertebrata; or he may pursue it for two terms, when the first term will be given to Pisces, Amphibia and Reptilia, the second to Aves and Mammalia.

A short course in invertebrate zoology will be given during the second term to students who wish a short laboratory course in zoology.

A short elective course in physiology will be given during the second term.

The zoological cabinet contains a small but typical collection of both vertebrates and invertebrates, and a collection of alcoholic specimens for use in the zoological laboratory.

TEXT-BOOKS.—Packard's Zoology, Orton's Comparative Zoology, Martin's The Human Body.

**CIVIL AND MECHANICAL ENGINEERING—PROFESSOR CONOVER,
assisted by MR. S. BULL.**

The courses of study in these departments have been so arranged as to secure to the students a thorough training in physics and in chemistry. It is also deemed necessary that the student shall obtain a mastery of the higher mathematics, and their application to the solution of engineering problems; and to this end the uninterrupted mathematical course of the Freshman and Sophomore years is followed by analytical and applied mechanics, and the resistance of materials analytically treated.

In the special studies of each of these departments it is the aim to illustrate the principles taught with numerous examples drawn from the best practice, and render the student as familiar as possible with the details of the work he is to undertake.

DRAUGHTING.—Instruction in draughting commences with the course of special study in the Sophomore year, and is continued in daily exercises of two hours each, throughout the course, with the exception of one term in the Junior year and such days as are taken for field practice in the one course, and shop-practice in the other. The students are first taught the use of draughting instruments, and the simpler draughting operations. The principles of descriptive geometry, taught in the class room, are then further illustrated and enforced by a progressive series of special problems, including projections and intersections of lines, surfaces, and solids; and problems in shades, shadows, perspective and isometric projection, which the students are required to solve, and carefully and exactly execute. These are followed in due order by instruction in shading and tinting with pen and brush, in India ink and water colors.

The students in civil engineering receive special instruction in the preparation of detailed drawings for masonry structures, in the delineation of topography by pen and in colors, and in the plotting of land, railroad and topographical surveys from the field notes. They are also required to make finished and detailed drawings of a variety of structures and apparatus.

Students in mechanical engineering are instructed in sketching and making working and finished drawings of machines. A large number of drawings is required, and the subjects are chosen almost exclusively from actual constructions. The principles of design are taught, and the students required to show his proficiency by making one or more original designs.

PRIME MOVERS.—The principles of thermo-dynamics and their application to theory of steam and gas engines, are taught by text-book and illustrated by the calculation of numerous examples, and a detailed study is made of the principles and practice of the designing of chimneys, boilers and engines.

A similar plan is pursued in the study of hydraulics and hydraulic motors and machines.

STRUCTURES OF WOOD, IRON AND STONE.—Both the analytical and graphical methods are applied to the solution of the problems of stability of structures; and the details of their construction are studied by means of a fine collection of drawings, photographs and models, illustrating the most recent constructions.

Sanitary and water engineering and railroad engineering are taught by lectures.

During the Senior year excursions are made from time to time for the purpose of examining structures and machinery of various kinds, and students are required to make reports on the same.

For graduation in either department, theses are required, whose plan includes original work or design.

FIELD PRACTICE.—The field practice in land surveying and engineering geodesy gives to each student such training as to render him expert in the use of the chain, rod, magnetic and solar compass, level, transit and plane table.

METALLURGY AND ASSAYING—MR. VANHISE—

METALLURGY is taught during the fall and winter terms of the Senior year, to students of the several technical courses. Greenwood's Manual is used as the ground-work of the course, which is illustrated by charts, lantern slides, collections of ores and technical products, etc. The subjects taken up in order are: general principles; fuels; furnaces; metallurgy of iron, steel, copper, lead, silver, gold, antimony, arsenic, tin, platinum, etc. Excursions are made to smelting establishments with the instructor, and memoirs descriptive of actual operations are required. Furnace construction is taught in the draughting room.

ASSAYING is taught during the spring term of the Junior year to students of the courses in metallurgy and mining engineering, and to such others as may so elect. The course includes about ten lectures on the theory and practice of assaying, the remainder of the work being in the laboratory. There the student is given ores of silver and gold, which he assays in duplicate by both crucible and scorification methods, the whole number of assays made being about 100. The assay of gold and silver bullion completes the course. The assay laboratory is provided with tables for eighteen students; six crucible furnaces; two roasting furnaces; two large muffle furnaces for cupellation and scorification; Blake crusher; bullion rolls; bullion assay apparatus, etc. The laboratory work generally extends into the fall term, and the student who satisfactorily completes the course is an expert in assaying.

TEXT-BOOK.—Greenwood's Manual of Metallurgy.

PRACTICAL MECHANICS—MR. KING—

The course in mechanical engineering was established in 1877, and with it was commenced, as a prime requisite, the fitting up of a proper machine shop, wherein instruction in practical mechanics and machine construction might be given, in connection with that in the class room.

The shop is a large, well-lighted room, 38 by 40 feet, 14 feet high, in the basement of Science Hall. The equipment of machinery and tools is all after the latest and most approved practice, and consists of a Sellers planer, three engine lathes, a hand lathe, a Brown & Sharp's milling machine, and a Fitchburg upright drill, with conveniently-placed and arranged work benches, vices, etc., and a large collection of taps, dies, twist drills, fluted reamers, etc. It has also received and put in place a Stowe flexible shaft and attachments, the gift of Mr. George W. Burnham, of Philadelphia. The motive power is furnished by a fine 30-horse power Crane Bros. steam engine.

Ten hours' work is required each week throughout the course. The method of instruction is modeled after the Russian system, and that of the Worcester, Mass., Institute of Industrial Science.

There are in process of construction in the shop the present year, a grinding lathe for grinding hardened surfaces, a "Fox lathe," for screw and brass work, and various small tools which are all for the equipment of the shop. In addition to these, a very ingeniously designed engine lathe, entirely new in both design and pattern, will be completed during the year; it will afford some excellent practice for students, and they will take such part in this work as their skill permits.

It is also designed to construct, as fast as possible, working models of machinery for the purpose of instruction, and each student, before graduating, will be required to design and construct one or more of these models.

AGRICULTURE—PROFESSOR HENRY—

In this course prominence is given to those sciences which afford mental discipline, and at the same time are essential to a comprehensive knowledge of the subject of agriculture. Studies of this character are chemistry, botany and zoology.

The course in chemistry extends through six terms, and consists largely of laboratory work in qualitative and quantitative analysis. The time allotted to this work is sufficient to enable the student to make accurate analyses of such substances as fertilizers, milk, etc. The last two terms are spent in a consideration of the chemistry of soils and of plant growth. For this purpose Johnson's "How Crops Feed," and "How Crops Grow," will be used as text-books.

Botany requires four terms. The first is devoted to a study of the common plants, while in the second the student proceeds by aid of the microscope to an examination of the lower forms of vegetable life, such as rusts, smut and molds. A portion of another term is devoted to a study of the grasses, thus enabling the student to determine accurately any specimens of this order he may meet. The last term in this course will be spent in experimenting in cross-fertilization of cultivated plants.

In the department of zoology, two terms will be given to a study of the structure of the horse and ox. This work is preparatory to the lectures on stock-breeding.

Bearing more directly upon farm duties is the instruction given in the machine shop, and the lectures and practical work in horticulture and agriculture. The student will spend one term with the superintendent of the machine shop in acquiring a familiarity with the use of tools. Horticulture is taught during two terms. A portion of the time will be spent in the orchard and vineyard, where practice will be given in layering, pruning, grafting and budding. In connection with this study, economic entomology will be taught, and careful attention given to the life history of noxious insects and the means of destroying them.

Agriculture proper is taught during the Senior year. Under this head lectures will be given upon fertilizers, rotation of crops, breeds of stock, principles of stock-breeding, drainage, farm bookkeeping, etc. During this year the student is expected to become familiar with the method of farming adopted on the University Experimental Farm, and, when possible, he will assist in conducting experiments. The University Farm, lying in close proximity to the college buildings, is well adapted to the purposes of illustration. It is well stocked with Holstein and Short-horn cattle, has orchards in full bearing, and fields in a high state of cultivation.

A knowledge of agriculture, requiring as it does a familiarity with so many of the sciences, demands that most of the time of a four years' course be devoted to careful study, in order that the student may attain to any degree of thoroughness in this department. In view of this fact he is not required to do any manual labor upon the farm except that which is educational, as mentioned under the subjects horticulture and agriculture. As a rule, the methods of performing ordinary farm work can be learned elsewhere by the student at far less expense to him than here; but those in this course seeking instruction in farm operations will have ample opportunity to obtain it. Any one taking this course who may desire work upon the farm in order to help defray college expenses, will be allowed fair remuneration for his services.

In order to accommodate those who are not prepared to pass all the entrance examinations required for regular students, and who do not desire to take the regular college course, the University will receive students in agriculture, either as special students or for a two years' course.

All such candidates will be required to pass through examinations in reading, spelling, penmanship, arithmetic, civil and descriptive geography, physical geography, grammar, and history of the United States. Upon passing a satisfactory examination in these branches, the student may enter the agricultural course at the beginning of any term, and pursue studies in that course, or may enter the two years' course. Those taking the two years' course should enter at the opening of the fall term. A certificate of proficiency will be given to those completing this course.

The *Two Years' Course* is as follows:

FIRST YEAR.

First Term—Zoology, Chemistry, Free-Hand Drawing, Horticulture.

Second Term—Chemistry, Shop Practice (use of tools), Zoology.

Third Term—Botany, Entomology, Horticulture (Fruit Raising).

SECOND YEAR.

First Term—Agriculture (Management of Crops), Physics, Botany.

Second Term—Agriculture (Lectures on Stock, etc.), Agricultural Chemistry, Botany.

Third Term—Agriculture (General Farm Management), Agricultural Chemistry, Botany.

Those taking this short course will not be in separate classes, but pursue the studies along with others in the full course; hence, the explanations given on preceding pages concerning horticulture and agriculture, etc., apply to all studies named in this list.

MUSIC—PROFESSOR PARKER.

There are two general classes in music, each of which meets once a week during the entire year. The first of these begins, at the opening of each year, with a course in the elements of the theory of music, combined with practical exercises in the art of reading vocal music. All students who desire to join this class are admitted without restriction.

The second class is devoted to the practice of glees, choruses, part-songs, etc. The selections of music are varied in kind and style, for the purpose of acquainting the students with the works of both classical and modern authors. All who enter this class are expected to read plain music readily.

Smaller organizations for special occasions or general practice are encouraged, and receive such attention as can be given without detriment to other work.

Private lessons in vocal culture, piano playing and harmony, are given to students pursuing any of the regular courses of study, on application, and presentation of a card from the secretary of the Board of Regents to indicate that the fees mentioned under the head of expenses have been paid. Special students taking two studies, may receive private lessons on the same conditions, by consent of the Faculty.

The instruction, both in singing and in piano playing, is designed to be thorough and progressive, combining a careful technical training with proper guidance to intelligent interpretation.

There are occasional public exercises in addition to class exercises.

LAW SCHOOL.

GENERAL STATEMENT.

The great advantage of professional schools for the rapid and thorough elementary training of professional men has been long since completely demonstrated, and no profession has more entirely accepted and heartily acknowledged the benefits of such schools than the legal profession.

The learning of this profession embraces almost all the relations of life, and the result of the experience of many ages is scattered through numerous treatises, reports, statutes and digests. To obtain the mastery of the topics embraced within the limits of the body of the law in such a degree of perfection as marks the learned lawyer, requires many years of diligent study and practical experience.

The beginner needs to gain a comprehensive general view and analysis of the whole system; then to learn, without the careful reading which would occupy a lifetime, what the books contain, and where to search for more particular and detailed information, and to acquire the habits and methods of legal study and thought.

This degree of attainment can be reached in the professional school in at least half the time in which the student can otherwise acquire it, and with the additional advantage that there is no incumbrance of obsolete ideas or mistaken impressions, which are so difficult for any but a lawyer to distinguish from living doctrine among the great mass of legal writings.

To afford the young men of Wisconsin and the northwest ready facilities for such acquirements, this department has been established.

THE METHOD OF INSTRUCTION

is for the most part by lectures and by reading under the direction of the professors, with moot court practice. The lecture system is peculiarly adapted to the study of law. Few text-books are written for students. The most elementary works are designed as exhaustive treatises for the use of lawyers, and embrace not only the history of the growth of doctrines, but also a discussion of subjects in more detail than the student requires so early. The lectures give a clear analysis of the subject under discussion, while the instructor can refer the student to such parts of the text-books, and to such adjudications in the reports, as present in the best manner the principles which it is important to know. The system of reading cases in connection with text-books and lectures, is of the first importance.

The moot court is held weekly. Here the students are taught to perform, as students, what they will be required to do as lawyers. The

preparation of pleadings and the argument of questions—selected from actual cases occurring in practice, and designed to illustrate the subjects discussed in the lectures—under direction of the dean of the faculty afford to the student unsurpassed facilities for acquiring a practical familiarity with the modes of administering the law. To those who know the difficulty with which the young lawyer acquires the easy confidence necessary to successful practice, this part of the school will especially commend itself. Additional means to the same end consist in the forming of clubs by the students themselves, to which the instructors will afford every assistance.

A certificate of graduation from this department entitles the student to admission to practice in all the courts of the state.

The peculiar advantages which the city of Madison, the capital of the state, affords to the student of law, deserve mention. All sessions of the Supreme Court are held here, and also one term of the United States Circuit and District Courts annually. The Circuit Court for the county of Dane holds three terms annually, so that there is almost constantly some court in session.

The Judges who preside in the courts held at Madison are as follows:

In the United States Court.

The Associate Justice of the Supreme Court of the United States assigned to the 7th Circuit:

HON. THOMAS DRUMMOND, *Circuit Judge.*

HON. ROMANZO BUNN, *District Judge.*

In the Supreme Courts of the State.

HON. ORSAMUS COLE, *Chief Justice.*

HON. WILLIAM P. LYON,

HON. HARLOW S. ORTON,

HON. DAVID TAYLOR,

HON. JAMES B. CASSODAY,

} *Associate Justices.*

In the Dane County Circuit.

HON. ALVA STEWART, *Circuit Judge.*

These courts hold their sessions in near proximity to the hall of the Law School, and students can readily avail themselves of the advantages which these courts afford in the trial of cases at *nisi prius* and the arguments of the cases *in banc*, where all the diversity of legal topics will be discussed from day to day, and cases, many of which are of great interest, not only on account of the questions at issue but on account of the public and private interests involved.

COURSE OF INSTRUCTION.

JUNIOR YEAR.

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| PROFESSOR CARPENTER..... | First term, Contracts, including Agency, <i>Parsons, Story on Agency.</i> |
| | Second term, Contracts, including Partnership, <i>Parsons.</i> |
| | Third term, Contracts, including Bailments, <i>Parsons, Story on Bailments.</i> |
| PROFESSOR VILAS..... | First term, Jurisdiction, Original Process, Common Law Pleadings, <i>Stephen.</i> |
| | Second term, Equity Pleadings, <i>Story.</i> |
| | Code Pleadings and Practice, <i>Bliss.</i> |
| | Third term, Code Pleading and Practice before Judgment, <i>Bliss.</i> |
| PROFESSOR SLOAN..... | First term, Real Estate. |
| | Second term, Real Estate. |
| | Third term, Real Estate and Eminent Domain, <i>Vols. I and II Washburn, Mills.</i> |
| PROFESSOR PINNEY..... | First and second terms, Corporations, Public and Private. |
| | Third term, Principles of Statutory Construction. |
| PROFESSOR BUNN..... | First term, Rights of Persons, including Domestic Relation, <i>Broom & Hadley.</i> |
| | Second term, Rights of Things, <i>Broom & Hadley.</i> |
| | Third term, Organization and Jurisdiction of the Federal Courts, Admiralty and Maritime Law, <i>Kent, Federal Decisions.</i> |

SENIOR YEAR.

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| PROFESSOR CARPENTER..... | First term, Notes and Bills, <i>Byles.</i> |
| | Second term, Torts, <i>Cooley.</i> |
| | Third term, Criminal Law, <i>Bishop.</i> |
| PROFESSOR VILAS..... | First term, Evidence, <i>Greenleaf.</i> |
| | Second term, Evidence, <i>Greenleaf.</i> |
| | Third term, Practice after Judgment and in Special Proceedings. |
| PROFESSOR SLOAN..... | First term, Equity Jurisprudence. |
| | Second term, Equity Jurisprudence. |
| | Third term, Equity Jurisprudence and Law of Notice. |
| PROFESSOR PINNEY..... | First and second terms, Real Estate, commencing with Uses and Trusts. |
| | Third term, Wills. |
| PROFESSOR BUNN..... | First term, Commercial and Maritime Law, <i>Kent, Abbott on Shipping.</i> |
| | Second term, Private Wrongs, <i>Broom & Hadley.</i> |
| | Third term, U. S. Constitution and Constitutional Limitations, <i>Cooley and Federal Decisions.</i> |
| Lectures will also be delivered during the course, as follows: | |
| PROFESSOR SPOONER..... | Homestead Exemptions, Mortgages, Tax-titles, Conditional Estates, etc. |
| PROFESSOR GAPEN..... | Medical Jurisprudence. |

ADMISSION AND GRADUATION.

Students will be admitted at any time, but those who are not collegiate graduates must be twenty years of age to enter this department. Candidates will be examined in the ordinary English branches. *Credentials of good moral character must be furnished.*

Every candidate for graduation is required to prepare and read before the class and faculty, within six weeks before the close of the collegiate year, a dissertation on some legal subject, or some subject connected with the history, science, or practice of the law, which shall be approved by the faculty.

The following resolution has been adopted by the regents:

Resolved, That no student shall hereafter be graduated from the Law Department who has not devoted two years to the study of the law; one year of which shall be under the direction and supervision of the faculty of said department; and that no student shall be graduated until he shall have passed a satisfactory examination after the completion of said two years of study, which examination shall be conducted by the law faculty in the presence of the annual board of visitors.

EXPENSES.

Matriculation fee, eighty dollars for the full course or fifty dollars for one year.

Non-residents of the State are required to pay, in addition, a tuition free of \$6.00 per term.

Diplomas, \$3.00.

GENERAL INFORMATION.

LIBRARIES.

The University Library contains over eleven thousand volumes, and is open to students every day from 9 A. M. to 1½ P. M., and from 2½ to 4½ P. M. The best American and foreign periodicals are taken.

Students also have an opportunity, free of expense, to consult the State Historical and State Libraries, the former numbering seventy thousand volumes, the latter comprising a choice collection of miscellaneous works and very complete law library. Each is furnished with commodious rooms kept comfortable at all hours of the day. These library privileges are unsurpassed in the west, and equalled in very few institutions in the country.

The students, by special arrangement, are enabled to take out books from the Free Library of the City of Madison. This is a very well selected collection of about eight thousand volumes.

APPARATUS, CABINETS, LABORATORIES.

The new science building is now in full operation, and affords the best opportunities for work in the several departments of science.

The University is provided with extensive and valuable geological and mineralogical cabinets and collections in natural history: also, with well selected philosophical and chemical apparatus.

There are also chemical, zoological, physical, mineralogical, and assay laboratories, well supplied with apparatus and material, affording excellent facilities for the prosecution of studies in the several departments of science.

The machine shop is amply provided with tools and machines, and gives good opportunities for work in practical mechanics.

The Astronomical Observatory, built by the liberality of ex-Gov. C. C. Washburn, is finished and is being completely furnished as rapidly as the nature of the work will allow. It has been placed under the direction of Prof. E. S. Holden, late of the U. S. Naval Observatory, Washington, and will doubtless take a first rank in science, and be a valuable auxiliary in instruction.

LADIES' HALL.

Ladies' Hall is an elegant and commodious building, containing a society hall, teachers' rooms, study and lodging rooms for about eighty students, and ample accommodations for boarding. Students' rooms are carpeted and furnished, but occupants are expected to provide the toilet sets needed in their rooms, also towels, napkins, sheets, pillow-cases,

blankets and counterpanes, all of which should be marked with the name of the owner. Young women occupying this building are under the immediate charge of the preceptress, are required to board with the matron, and are expected cheerfully to conform to the rules requisite for a quiet and orderly household. No responsibility is assumed for pupils rooming in the city, beyond that involved in good scholarship and general deportment. The rooms are in suits to accommodate four students; if unnecessarily occupied by a less number, the additional expense of fuel, light, and room-rent will be charged to the occupants *pro rata*. Gas has been introduced into Ladies' Hall, and an abundant supply of water has been provided. Ladies' Hall is now under the immediate charge of Prof. John W. Sterling, as principal, who has consented to reside in the Hall with his family. Prof. Sterling is Vice-President of the University, and has been connected with the institution from its foundation. His presence there and the supervision of the Hall by himself and Mrs. Sterling, afford a sufficient guarantee for its excellent government.

POLICY.

The policy of the institution is determined by the regents, who, as a body, represent the people, and no particular sect or party. It is the aim of the University to meet the highest educational wants of every student in the state. In the elective studies there is provision for the demands of higher scholarship. It is advisable that students should pursue a prescribed course, if possible, but they may select any studies, subject to the direction of the faculty.

GOVERNMENT.

Students are held responsible only for good order and the diligent use of their time. Those who fail to conform to this simple requirement will be dismissed. The University is no place for those who do not propose to give their whole time to the work prescribed for them by the faculty. The loss of a single recitation injures not only the student, but those connected with him. Students who room in the city will be held responsible for good behavior everywhere, but will be under our direct supervision only when on our grounds, and in their work with us. Leave of absence will not be granted except in case of absolute necessity.

EXAMINATIONS.

There will be no special public examination of all the classes at the close of the year. All persons desirous of knowing the character of the work done at the University are invited to be present at the regular exercises and examinations of the classes. The members of the board of visitors will visit the University from time to time during the year, to inspect the work done in recitations, lectures, laboratory work and examinations.

HONORS IN SPECIAL STUDIES.

Special honors are given, under recommendation of the professors in the several departments, to the members of the graduating class who have done special work under the direction of the professor of any department, and prepared an acceptable thesis; but the amount of work required for a special honor must be at least the equivalent of a full study for one term, and in the case of those branches in which there are longer and shorter elective courses, the student must have taken the longer course as his regular study.

Candidates for special honors must have a general average standing of 85, and one of 93 in the department in which the application is made.

Students taking special honors read their theses in public on the Monday next preceding commencement day, or such of the students, not exceeding three in number, who shall have honor orations assigned them for the exercises of commencement day, may substitute their thesis for the orations.

DEGREES.

Academic.

The degree of *Bachelor of Science* is conferred upon such persons as satisfactorily complete the General Science Course.

The degree of *Bachelor of Arts* is conferred upon such persons as satisfactorily complete the Ancient Classical Course.

The degree of *Bachelor of Letters* is conferred upon such persons as satisfactorily complete the Modern Classical Course.

The degree of *Master of Science*, *Master of Arts*, and *Master of Letters* are conferred respectively upon Bachelors of Science, Arts, and Letters, upon either of the following conditions:

1. After three years spent in scientific or literary pursuits, upon passing a satisfactory examination, and presenting to the faculty an acceptable thesis upon some subject previously agreed upon.

2. After one year spent at the University in pursuit of scientific or literary studies, under the direction of the faculty, upon passing the requisite examinations and presenting a satisfactory thesis upon some subject within the line of study to which they have chiefly devoted their attention.

The degree *Master of Letters* is conferred, on the same conditions, upon Bachelors of Science who pursue a course of literary studies.

The University does not offer the degree of *Doctor of Philosophy*.

Special and Professional.

The degrees of *Bachelor of Agriculture*, *Bachelor of Civil Engineering*, *Bachelor of Metallurgical Engineering*, *Bachelor of Mining Engineering*, and *Bachelor of Mechanical Engineering*, are conferred respectively upon such persons who satisfactorily complete the course of study in agriculture, or in civil, metallurgical, mining or mechanical engineering.

The degrees of *Civil Engineering*, *Metallurgical Engineer*, *Mining Engineer*, and *Mechanical Engineer*, are conferred respectively upon bachelors of civil, metallurgical, mining or mechanical engineering as, after one year of additional study and practice, present a suitable project, and pass the requisite examinations. Residence at the University will not be required during the year.

The degree of *Bachelor of Laws* is conferred upon those who satisfactorily complete the course of study prescribed in the Law School.

LITERARY SOCIETIES.

The literary societies—Athenæan, Hesperian, Calliopean, Linonian, Castalian, and Laurean—are sustained with interest, and aid in the intellectual training of the student.

PHYSICAL TRAINING.

Military drill is required of the young men of the Freshmen and Sophomore classes. A well furnished gymnasium and two bowling alleys are open to the students at fixed hours. The University is situated on the shores of Lake Mendota, and the student can find relaxation and exercise in boating.

SCHOLARSHIPS.

The University is indebted to the liberality of Hon. John A. Johnson, of Madison, for ten scholarships of \$50 annual value each, established under the following conditions:

The sum received by one student in one year shall not exceed \$50, nor the sum received during his college course exceed \$200. Until the year 1900 the fund will be limited to students speaking one of the Scandinavian languages (Norse, Swedish, Danish, or Icelandic). No student can receive aid from this fund unless he has attended a common school one year, or has attended the University one year. The recipient of aid will be expected to return the money received by him to the fund, if he shall at any time be able to do so. The income of the fund will be dispensed by a committee of three members of the faculty. For the present this committee is constituted as follows: President Bascom, Professors Sterling and Anderson.

THE LEWIS PRIZE.

The Lewis prize fund, the fruits of a donation made by Ex-Governor James T. Lewis, now yields annually \$20. The sum is bestowed on the student furnishing the best commencement piece. It was given for the year 1875, to Fannie West, of Milwaukee; for 1876, to A. S. Ritchie, of Racine; for 1877, to Charles L. Dudley, of Madison; for 1878, to Fred King Conover, of Madison; for 1879, to Belle Case, of Baraboo; for 1880, Henry Decker Goodwin, of Milwaukee; for 1881, to Howard L. Smith, of Madison.

ROOMS.

No student will be allowed to occupy a room in the dormitories until his bills for the term are settled. Students are allowed the choice of

rooms, in the order of the classes. Regular students, in previous occupancy, if on the ground at the opening of the term, are permitted to retain their rooms, unless needed for those in higher classes.

Rooms for young men are furnished at the expense of the students, who should bring their own bedding, towels, etc. Other furniture can be obtained here, second-hand or new, at moderate prices.

Students will not be allowed to board themselves in either dormitory. Occupants of rooms are held responsible for damages to them.

EXPENSES.

| | |
|--|--------|
| Room rent in North and South Dormitories, per term, | \$5 00 |
| Tuition to residents of the State of Wisconsin, | FREE. |
| Tuition for non-resident students, per term, | 6 00 |
| General Expenses—First Term, | 4 00 |
| " " Second Term, | 4 00 |
| " " Third Term, | 2 00 |
| Room rent in Ladies' Hall, per term, | 6 00 |
| Fuel and lights may be had at actual cost. | |
| Board in Ladies' Hall, including washing of bedding, towels, and napkins, per week. | 3 00 |
| Personal washing, Ladies' Hall, per dozen, | 60 |
| Instrumental Music, 20 lessons, | 10 00 |
| Use of instrument, per term, | 2 00 |
| Vocal Music, 20 lessons, | 10 00 |
| Matriculation fee, in the Law School, for course, | 80 00 |
| " " " " one year, | 50 00 |

The cost of board in clubs is from \$1.75 to \$2.25 per week; in private families from \$2 to \$4 per week; washing from 60 to 75 cents per dozen.

Rooms can be obtained in the city at reasonable rates. Students can frequently obtain work, but this depends on their own skill.

Students will be charged for not less than one term, and no deduction will be made for voluntary absence. Students are allowed 12½ cents per hour for work on the University farm, when this work can be furnished. Payment of all University charges for tuition, room rent, heating, etc., is required strictly in advance, and is payable to the secretary of the board of regents.

Students working in the laboratories are required to make deposits of from \$5 to \$30 to cover the cost of instruments and materials used by them. An accurate account of the same is kept, and the amount of the deposit not used returned to the student at the close of his course of study in the laboratory.

NOTE.—\$3 is charged for each diploma. The items of expense are subject to revision at the commencement of each collegiate year.

CALENDAR.

ACADEMIC YEAR, 1881-82.

FALL TERM begins Wednesday, September 7, and closes Wednesday, December 21—15 weeks.

WINTER TERM begins Wednesday, January 4, and closes Wednesday, March 29—12 weeks.

SPRING TERM begins Wednesday, April 5, and closes Wednesday, June 21—11 weeks.

EXAMINATION of Candidates for admission, June 14 and 15.

BACCALAUREATE SERMON, Sunday, June 18.

COMMENCEMENT, Wednesday, June 21.

ACADEMIC YEAR, 1882-83.

FALL TERM begins Wednesday, September 6, and closes Wednesday, December 20—15 weeks.

WINTER TERM begins Wednesday, January 3, and closes Wednesday, March 28—12 weeks.

SPRING TERM begins Wednesday, April 4, and closes Wednesday, June 20—11 weeks.

LEGAL HOLIDAYS.

ELECTION DAY, Tuesday, November 8, 1881.

THANKSGIVING, Thursday, November 24, 1881.

WASHINGTON'S BIRTHDAY, Wednesday, February 22, 1882.

DECORATION DAY, Tuesday, May 30, 1882.

