

SWARTHMORE COLLEGE,

1881-82.

SWARTHMORE COLLEGE



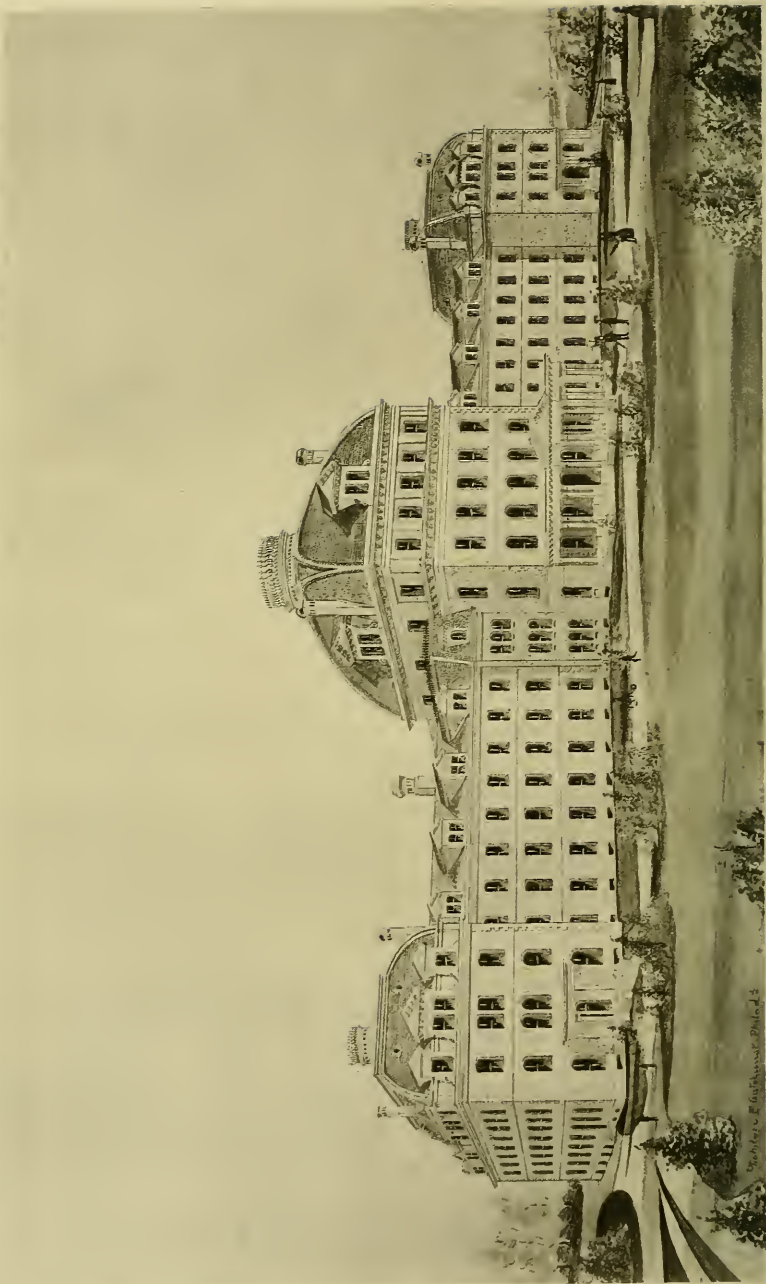
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Author:
Swarthmore
college.

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Catalogue

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SWARTHMORE COLLEGE.

THIRTEENTH
ANNUAL CATALOGUE
OF
SWARTHMORE COLLEGE,

SWARTHMORE, PA.

1881-82.

PRESS OF
FRIENDS' BOOK ASSOCIATION,
1020 Arch Street, Philadelphia.

CALENDAR.

1881-82.

| | | | |
|-------|----------------------|--------------|---|
| 1881. | Ninth month 13th, | Third-day, | Meeting of the Board of Managers. |
| " | Ninth month, 13th, | Third-day, | Examinations for admission begin. |
| " | Ninth month, 15th, | Fifth-day, | Examinations for admission completed, and old students return. |
| " | Ninth month, 16th, | Sixth-day, | Regular Exercises begin. |
| " | Twelfth month, 5th, | Second-day, | Meeting of the Board of Managers. |
| " | Twelfth month, 6th, | Third-day, | ANNUAL MEETING OF STOCKHOLDERS. |
| " | Twelfth month, 6th, | Third-day, | Meeting of the Board of Managers. |
| " | Twelfth month, 23rd, | Sixth-day, | Holidays begin. |
| 1882. | First month, 2nd, | Second-day, | Students return for roll-call at 8 P. M. |
| " | First month, 3rd, | Third-day, | Regular Exercises begin. |
| " | Third month, 7th, | Third-day, | Meeting of the Board of Managers. |
| " | Fifth month, 6th, | Seventh-day, | Junior Exhibition. |
| " | Fifth month, 15th, | Second-day, | Senior Examinations begin. |
| " | Fifth month, 22nd, | Second-day, | Senior Examinations completed, the results announced, and parts for Com- mencement assigned. |
| " | Sixth month, 19th, | Second-day, | Meeting of the Board of Managers, and the Annual Business Meeting of the Alumni Association in the evening. |
| " | Sixth month, 20th, | Third-day, | COMMENCEMENT. |
| " | Ninth month, 12th, | Third-day, | Meeting of the Board of Managers. |
| " | Ninth month, 12th, | Third-day, | Examinations for admission begin. |
| " | Ninth month, 14th, | Fifth-day, | Examinations for admission completed, and old students return. |
| " | Ninth month, 15th, | Sixth-day, | Regular Exercises begin. |
| " | Twelfth month, 4th, | Second-day, | Meeting of the Board of Managers. |
| " | Twelfth month, 5th, | Third-day, | ANNUAL MEETING OF STOCKHOLDERS. |
| " | Twelfth month, 5th, | Third-day, | Meeting of the Board of Managers. |
| " | Twelfth month, 23rd, | Seventh-day, | Holidays begin. |
| 1883. | First month, 3rd, | Fourth-day, | Students return for roll-call at 8 P. M. |
| " | First month, 4th, | Fifth-day, | Regular Exercises begin. |

CORPORATION.

Officers.

CLERKS.

GEORGE W. HANCOCK,
MATILDA GARRIGUES,

*Fortieth St. and Lancaster Ave., Phila.
Kingsessing, Philadelphia.*

TREASURER.

ROBERT BIDDLE,

No. 511 Commerce Street Philadelphia.

BOARD OF MANAGERS.

Term expires Twelfth Month, 1882.

ISAAC STEPHENS,
JAMES V. WATSON,
CLEMENT BIDDLE,
ISAAC H. CLOTHIER,
MARTHA G. McILVAIN,
SOPHIA U. WILLETS,
ELIZA H. BELL,
SALLIE M. OGDEN,

*Trenton, N. J.
No. 718 Franklin Street, Philadelphia.
Chaddsford, Pa.
No. 801 Market Street, Philadelphia.
Sixtieth St. and Elmwood Ave., Phila.
Manhasset, L. I.
Bayside, Queens County, N. Y.
No. 317 Vine Street, Philadelphia.*

SWARTHMORE COLLEGE.

Term expires Twelfth Month, 1883.

| | |
|-----------------------|---|
| JOHN D. HICKS, | <i>Old Westbury, L. I.</i> |
| ROBERT WILLETS, | <i>Flushing, L. I.</i> |
| JOSEPH WHARTON, | <i>P. O. Box 2786, Philadelphia.</i> |
| M. FISHER LONGSTRETH, | <i>Sharon Hill, Delaware Co., Penna.</i> |
| HANNAH W. HAYDOCK, | <i>No. 212 East 12th Street, New York.</i> |
| ANNA M. FERRIS, | <i>Wilmington, Delaware.</i> |
| MARY T. LONGSTRETH, | <i>Sharon Hill, Delaware Co., Penna.</i> |
| ANNIE SHOEMAKER, | <i>Friends' Central School, 15th & Race Sts. Phila.</i> |

Term expires Twelfth Month, 1884.

| | |
|--------------------------|---|
| CLEMENT M. BIDDLE, | <i>No. 506 Commerce Street, Philadelphia.</i> |
| JOSEPH WILLETS, | <i>Trenton, N. J.</i> |
| ELI M. LAMB, | <i>Friends' School, Lombard St., Balt., Md.</i> |
| BENJAMIN HALLOWELL, JR., | <i>Swarthmore, Penna.</i> |
| RACHEL T. JACKSON, | <i>No. 313 Chelton Ave., Germantown, Pa.</i> |
| ANNA M. HUNT, | <i>No. 1802 Wallace St., Philadelphia.</i> |
| SUSAN W. LIPPINCOTT, | <i>Cinnaminson, N. J.</i> |

Term expires Twelfth Month, 1885.

| | |
|-------------------|---|
| SAMUEL WILLETS, | <i>No. 303 Pearl St., New York.</i> |
| EDWARD H. OGDEN, | <i>No. 314 Vine St., Philadelphia.</i> |
| DANIEL UNDERHILL, | <i>Fericho, L. I.</i> |
| EMMOR ROBERTS, | <i>Fellowship, N. J.</i> |
| JANE P. DOWNING, | <i>No. 1613 Race St., Philadelphia.</i> |
| MARY W. COCKS, | <i>Old Westbury, L. I.</i> |
| SARAH H. POWELL, | <i>No. 324 West 58th St., New York.</i> |
| EDITH D. BENTLEY, | <i>Sandy Spring, Md.</i> |

Officers and Committees of the Board.

PRESIDENT.

SAMUEL WILLETS.

SECRETARY.

M. FISHER LONGSTRETH.

AUDITORS.

M. FISHER LONGSTRETH,

GEORGE W. HANCOCK.

INSTRUCTION.

CLEMENT BIDDLE,

M. FISHER LONGSTRETH,

ANNA M. FERRIS,

ANNA M. HUNT,

JOSEPH WHARTON,

EMMOR ROBERTS,

BENJAMIN HALLOWELL, JR.,

HANNAH W. HAYDOCK.

MUSEUM AND LABORATORIES.

JOSEPH WHARTON,

ANNA M. HUNT,

M. FISHER LONGSTRETH,

MARY T. LONGSTRETH.

FRIENDS' HISTORICAL LIBRARY.

RACHEL T. JACKSON,

ISAAC STEPHENS,

ANNA M. FERRIS,

ELI M. LAMB.

FINANCE.

ISAAC H. CLOTHIER,

JAMES V. WATSON,

EDWARD H. OGDEN.

BUILDING AND PROPERTY.

| | |
|--------------------|--------------------|
| EDWARD H. OGDEN, | ISAAC H. CLOTHIER, |
| EMMOR ROBERTS, | CLEMENT M. BIDDLE, |
| JAMES V. WATSON, | DANIEL UNDERHILL, |
| GEORGE W. HANCOCK. | |

TRUSTS, ENDOWMENTS AND SCHOLARSHIPS.

| | |
|--|--------------------|
| SAMUEL WILLETS, | DANIEL UNDERHILL, |
| JOSEPH WHARTON, | ISAAC H. CLOTHIER, |
| M. FISHER LONGSTRETH, Sec'y and Treas. of Committee. | |

EXECUTIVE COMMITTEE.

| | |
|--|----------------------|
| ISAAC H. CLOTHIER, | MARTHA G. McILVAIN, |
| CLEMENT BIDDLE, | JANE P. DOWNING, |
| DANIEL UNDERHILL, | ANNA M. FERRIS, |
| JOSEPH WHARTON, | MARY T. LONGSTRETH, |
| EMMOR ROBERTS, | ANNA M. HUNT, |
| EDWARD H. OGDEN, | SALLIE M. OGDEN, |
| GEORGE W. HANCOCK, | SUSAN W. LIPPINCOTT, |
| BENJAMIN HALLOWELL, Jr., | JOHN D. HICKS, |
| M. FISHER LONGSTRETH, <i>Ex-officio.</i> | |

Faculty of Government.



THE PRESIDENT.

THE MATRON.

EUGÈNE PAULIN.

ARTHUR BEARDSLEY.

WILLIAM HYDE APPLETON.

SUSAN J. CUNNINGHAM.

SAMUEL S. GREEN.

GEORGE L. MARIS.

MARY L. AUSTIN.

THOMAS S. FOULKE.

Officers of Government and Instruction.

- EDWARD H. MAGILL, A. M.,
President, and Professor of the Latin Language.
- CAROLINE S. WOOD,
Matron.
- JOSEPH LEIDY, M. D., LL. D.,
Professor of Natural History.
- EUGÈNE PAULIN, A. M.,
*Professor of the French Language and of Mental and Moral
Philosophy.*
- ARTHUR BEARDSLEY, C. E.,
Professor of Mechanics and Engineering, and Librarian.
- *WILLIAM HYDE APPLETON, A. M.,
Professor of the Greek and German Languages.
- SUSAN J. CUNNINGHAM,
Professor of Mathematics.
- JOSEPH THOMAS, M. D., LL. D.,
Professor of English Literature.
- SAMUEL S. GREEN, M. S.,
Professor of Physics and Chemistry.
- GEORGE L. MARIS, A. M.,
Professor of Theory and Practice of Teaching.
- MARY L. AUSTIN,
Assistant Professor of the Latin Language.
- THOMAS S. FOULKE,
Superintendent.
- ELIZABETH C. MILLER, A. B.,
Assistant Professor of Rhetoric and Instructor in Greek.
- WILLIAM PENN HOLCOMB, M. L.,
Assistant Professor of History and Instructor in English.
- ELLEN M. GRISCOM,
Instructor in Free-hand Drawing.
-

* Absent this year in Greece. Will resume his duties in Ninth month, 1882.

- AMELIA P. BUTLER,
Instructor in Theory and Practice of Teaching.
- JOSEPH W. TEETS,
Instructor in Elocution.
- ARTHUR COLMAN DAWSON,
Instructor in German and French.
- FRANCES LINTON, A. M.,
Instructor in English.
- ENOCH C. LAVERS, B. S.,
Instructor in Botany.
-

INSTRUCTORS IN THE PREPARATORY SCHOOL.

- EUGÈNE PAULIN, A. M.,
Instructor in French.
- SAMUEL S. GREEN, M. S.,
Instructor in Physics and Chemistry.
- MARY L. AUSTIN,
Instructor in Latin.
- ESTHER T. MOORE, A. B.,
Instructor in Mathematics and in English Grammar.
- ELLEN M. GRISCOM,
Instructor in Free-hand Drawing.
- WILLIAM PENN HOLCOMB, M. L.,
Instructor in History.
- ELIZABETH T. LETCHWORTH,
Instructor in Penmanship.
- AMELIA P. BUTLER,
Instructor in English Branches.
- LILIAN M. ROCKWELL,
In charge of Study Room.
- JOSEPH W. TEETS,
Instructor in Reading and Speaking.
- ARTHUR COLMAN DAWSON,
Instructor in French and German.
- FRANCES LINTON, A. M.,
Instructor in English and Latin.
- ENOCH C. LAVERS, B. S.,
Instructor in Natural Sciences.
- OLIVIA RODHAM,
Assistant Librarian, and Instructor in English Branches.

STUDIES.

The studies required for a degree extend over a period of four years. Each class is divided into three sections, as follows :

The Classical Section, in which prominence is given to the study of the ancient languages. Students completing the courses of this section receive the degree of *Bachelor of Arts*.

The Scientific Section, in which the study of the sciences is made most prominent. Students completing the required courses of this section receive the degree of *Bachelor of Science*.

The Literary Section, in which the leading studies are the modern languages, including English. Students completing the courses of this section receive the degree of *Bachelor of Literature*.

REQUIREMENTS FOR ADMISSION.

To secure places, application for admission should be made as early as possible by letter to the President.

All applicants must submit satisfactory testimonials of good moral character from their last teachers, and students coming from another college must present certificates of honorable dismissal from the institution left.

Students are not considered as regular members of the College until, after a residence of at least four months, they have been admitted to matriculation. Before this they are students on probation.

Examinations for admission will be held at Swarthmore on Third, Fourth, and Fifth-days, the 12th, 13th and 14th of Ninth month, 1882. Candidates must present themselves at the College at three o'clock P. M., on Third-day, the 12th of Ninth month.

Students in Friends' Schools may take their examination for admission in the preceding Sixth month ; the Superintendent of Friends' Schools, when requested, visiting for that purpose the schools under his supervision.

Especial attention is called to the importance of a thorough preparation in the studies required for admission. The want of this is a serious source of embarrassment to future progress, and is rarely repaired by subsequent study.

Candidates imperfectly prepared are offered (in the Preparatory school) facilities for making up their deficiencies.

Candidates for admission to the Freshmen class will be examined on the following subjects and text-books, or their equivalents :

Those entering the **CLASSICAL SECTION** in—

Latin.—Harkness's Grammar; Harkness's Reader; Harkness's Composition, first thirty lessons; Cæsar's Gallic War, first three books; and Virgil's *Æneid*, first four books.

French.—Magill and Paulin's first Lessons; Magill's Grammar; Magill's Introductory Reader; or an equivalent amount of German or of Greek.

Mathematics.—Arithmetic; Algebra through Equations of the Second Degree of one unknown quantity; Davies's Legendre's Geometry, first four books.

English.—Grammar; Spelling; Composition.

History.—History of the United States; History of England; History of Greece.

Geography.—Ancient Geography; Modern Geography; Physical Geography.

Those entering the **SCIENTIFIC SECTION** in—

Mathematics.—Arithmetic; Algebra through Equations of the Second Degree of one unknown quantity; Davies's Legendre's Geometry, first four books.

Natural Philosophy.—Elementary Physics and Chemistry.

French.—Magill and Paulin's First Lessons; Magill's Grammar; Magill's Introductory Reader; or an equivalent amount of German.

English.—Grammar; Spelling; Composition.

History.—History of the United States; History of England.

Geography.—Modern Geography; Physical Geography.

Those entering the **LITERARY SECTION** in—

French.—Magill and Paulin's First Lessons; Magill's Grammar; Magill's Introductory Reader, or an equivalent amount of German.

Mathematics.—Arithmetic; Algebra through Equations of the Second Degree of one unknown quantity; Davies's Legendre's Geometry, first four books.

English.—Grammar; Spelling; Composition.

History.—History of the United States; History of England; History of Greece.

Geography.—Ancient Geography; Modern Geography; Physical Geography.

For Advanced Standing.—Candidates will be further examined in the studies already pursued by the class for which they present themselves ; but in the case of such students, real equivalents will be accepted for any of the studies gone over by the class.

ADMISSION WITHOUT EXAMINATION.

The privilege of admission without examination is extended as follows :

I. To those candidates for the Freshman Class who shall present certificates of their qualification from the Principals of the following schools :

Friends' Central School in Philadelphia.

Friends' Seminary in New York.

Friends' High School in Baltimore.*

II. To a limited number of teachers and other persons of fair education and mature years, who may wish to improve themselves in particular studies. These will be received as *special students*, and allowed to elect, in any of the regular classes, such work as they can pursue to advantage.

ARRANGEMENT OF STUDIES.

The attention of parents and guardians is called to the following arrangement of the Courses of Study. In the lower College classes most studies are required, while in the higher many are elective. The pursuit of the regular course, whether students are candidates for degrees or not, is especially recommended. When the programme will admit of it, students who are qualified to do so, may elect any of the studies required of another section of their own class. When students are qualified in any particular study to recite with a class other than their own, they may be permitted to do so by vote of the Faculty.

* Other Friends' Schools desiring to be included in the above list are requested to make application to the Faculty.

FIRST YEAR OR FRESHMAN STUDIES.

FOR THE DEGREE OF A. B.

| | No. of ex- * per week. |
|----------------------------------|------------------------------|
| Latin, - - - - | 4 |
| Mathematics, - - - | 3 |
| French, - - - - | 3 |
| Natural History, - - - | 2 |
| { English Lit. 1st 1/2 yr. 1=1/2 | |
| Mineralogy, Geology or | |
| Botany 2d 1/2 yr. - 1=1/2 | |
| Elocution, - - - - | 1 |
| Rhetoric and Composition, | 2 |
| Elective, - - - - | 6 |
| | — |
| | 22 |
| | = |

ELECTIVE STUDIES.

One of the Studies taken must be a Language.

| | |
|--------------------------------|---|
| Greek, - - - - | 3 |
| German, - - - - | 3 |
| History, - - - - | 3 |
| Teaching (Theory 1, Prac. 4)=3 | |

FOR THE DEGREE OF B. L.

The studies are the same as the above, except Latin and Greek. Instead of Latin are required :—

| | |
|--|-----|
| Critical Readings from Modern English, - - - | 2 |
| Mechanics, 1st 1/2 yr. - | 2=1 |
| Physics, 2nd 1/2 yr. - | 2=1 |

FOR THE DEGREE OF B. S.

| | No. of ex- * per week. |
|----------------------------------|------------------------------|
| Chemistry(Theory 2, Prac. 2)=3 | |
| Mechanics, 1st 1/2 yr. - | 2=1 |
| Physics, 2nd 1/2 yr. - | 2=1 |
| Mathematics, - - - | 4 |
| French, - - - - | 3 |
| Natural History, - - - | 2 |
| { English Lit. 1st 1/2 yr. 1=1/2 | |
| Mineralogy, Geology or | |
| Botany, 2d 1/2 yr. - 1=1/2 | |
| Elocution, 1st 1/2 yr. | 1=1/2 |
| Botany, 1st 1/2 yr. - | 1=1/2 |
| " 2nd 1/2 yr. | 2= 1 |
| Rhetoric and Composition, | 2 |
| Elective, - - - - | 3 |
| | — |
| | 22 |
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ELECTIVE STUDIES.

| | |
|--------------------------------|---|
| Engineering, - - - - | 3 |
| German, - - - - | 3 |
| Teaching (Theory 1, Prac. 4)=3 | |

* Each Exercise occupies 45 minutes.

SECOND YEAR OR SOPHOMORE STUDIES.

FOR THE DEGREE OF A. B.

| | No. of ex.* per week. |
|-------------------------------|--------------------------|
| Latin, - - - | 4 |
| Mathematics, - - - | 2 |
| German, - - - | 3 |
| English Literature (Lectures) | |
| 1st ½ yr. - - - | 1=½ |
| Mineralogy, Geology or Bot- | |
| any (Lect'rs) 2d ½ yr. 1=½ | 1=½ |
| Elocution, 1st ½ yr. | 1=½ |
| Botany, 1st ½ yr. - | 1=½ |
| " 2nd ½ yr. | 2=1 |
| Natural History, - - - | 2 |
| Rhetoric and Composition, | 2 |
| Elective, - - - | 6 |
| | — |
| | 22 |
| | = |

ELECTIVE STUDIES.

| | |
|--------------------------------|---|
| Greek, - - - | 3 |
| French, - - - | 3 |
| English, . - - - | 3 |
| Teaching (Theory 1, Prac. 4)=3 | |

FOR THE DEGREE OF B. L.

Candidates for this degree elect three periods of English, and do not take Latin or Greek. Instead of Latin are required:

| | |
|------------------|---|
| Physics, - - - | 2 |
| Chemistry, - - - | 2 |

The remaining studies are the same as above.

FOR THE DEGREE OF B. S.

| | No. of ex.* per week. |
|-------------------------------|--------------------------|
| Mathematics, - - - | 4 |
| Physics, - - - | 2 |
| German, - - - | 3 |
| English Literature (Lectures) | |
| 1st ½ yr. - - - | 1=½ |
| Mineralogy, Geology or Bot- | |
| any, 2nd ½ yr. - | 1=½ |
| Elocution, - - - | 1 |
| Chemistry (Prac. 4 Lectures | |
| 1) 1st ½ yr. - | 3=1½ |
| Surveying and Mechanics, | |
| 2nd ½ yr. - | 3=1½ |
| Draughting, - - - | 2=1 |
| Natural History, - - - | 2 |
| Rhetoric and Composition, | 2 |
| Elective, - - - | 3 |
| | — |
| | 22 |
| | = |

ELECTIVE STUDIES.

| | |
|------------------------|------|
| Descriptive Geometry 2 | } =3 |
| and Shop Prac. 2=1 | |
| French - - - | 3 |
| English, - - - | 3 |
| Teaching, - - - | 3 |

* Each Exercise occupies 45 minutes.

THIRD YEAR OR JUNIOR STUDIES.

FOR THE DEGREE OF A. B.

| | No. of ex.* per week |
|---|-------------------------|
| Latin, - - - | 4 |
| Mechanics, 1st 1/2 yr. 2=1 | 2=1 |
| Physics, 2nd 1/2 yr. - 2=1 | 2=1 |
| Chemistry, - - - | 2 |
| Political Economy, 1st 1/2 year, - - - | 1=1/2 |
| Mineralogy, Geology or Bot- any (Lect's) 2nd 1/2 yr. 1=1/2 | 1=1/2 |
| Rhetoric and Composition, | 2 |
| German, - - - | 3 |
| Elocution, - - - | 1 |
| Elective, - - - | 7 |
| | — |
| | 22 |
| | = |

ELECTIVE STUDIES.

| | |
|------------------------|-----|
| Greek, - - - | 4 |
| French, - - - | 3 |
| Mathematics, - - - | 4 |
| English, - - - | 3 |
| Mechanics, - - - | 2 |
| Graphics, - - - | 4=2 |
| Chemistry (Practice) - | 2=1 |
| Free Hand Drawing, - | 4=2 |
| Teaching, - - - | 6 |
| History, - - - | 3 |

FOR THE DEGREE OF B. L.

Candidates for this degree take all the studies required above, except Latin, Physics and Chemistry. The other required studies are:

| | |
|-----------------|---|
| English, - - - | 3 |
| French, - - - | 3 |
| Elective, - - - | 9 |

A course in beginning Latin (4) is elective; also a larger amount of Practice in Chemistry than is given above.

FOR THE DEGREE OF B. S.

| | No. of ex.* per week. |
|---|--------------------------|
| Physics (Practice) - | 2=1 |
| Rhetoric and Composition, | 2 |
| Political Economy, 1st 1/2 year, - - - | 1=1/2 |
| Mineralogy, Geology or Bot- any (Lect's) 2nd 1/2 yr. 1=1/2 | 1=1/2 |
| German, - - - | 3 |
| Elocution, - - - | 1 |
| Elective (Courses I or II) = | 14 |
| | — |
| | 22 |
| | = |

ELECTIVE COURSES.

I. *Course in Engineering.*

| | |
|-----------------------------|-----|
| Engineering, - - - | 3 |
| Mechanics, - - - | 3 |
| Graphics, - - - | 6=2 |
| Field, shop or office work, | 6=2 |
| Mathematics, - - - | 4 |

II. *Course in Chemistry.*

| | |
|--|---------|
| Chemical Philosophy 1st 1/2 year, - - - | 3=1 1/2 |
| Organic Chemistry, 2nd 1/2 year, - - - | 3=1 1/2 |
| French or English, - - | 3 |
| Quantitative Analysis | 12=4 |
| Mathematics or Latin - | 4 |

* Each Exercise occupies 45 minutes.

FOURTH YEAR OR SENIOR STUDIES.

FOR THE DEGREE OF A. B.

| | No. of ex.* per week. |
|---------------------------|--------------------------|
| Latin, - - - | 4 |
| Geology, - - - | 1 |
| Elocution, - - - | 1 |
| Mental Philosophy, - | 2 |
| Rhetoric and Composition, | 2 |
| Elective, - - - | 12 |
| | — |
| | 22 |
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ELECTIVE STUDIES.

| | |
|---------------------------------|---|
| Greek, - - - | 4 |
| Mathematics, - - - | 4 |
| German, - - - | 3 |
| French, - - - | 3 |
| English, - - - | 3 |
| Laboratory Chem. 12 or 6=6 or 3 | |
| Drafting and Shop Work, 4=2 | |
| Teaching, - - - | 6 |
| Free Hand Drawing, 2=1 | |
| Physics, - - - | 2 |
| History, - - - | 3 |

FOR THE DEGREE OF B. L.

Candidates for this degree take all the studies required above except Latin. The other required studies are:

| | |
|-----------------|---|
| English, - - - | 3 |
| French, - - - | 3 |
| German, - - - | 3 |
| Elective, - - - | 8 |

A course in beginning Latin (4) is elective.

FOR THE DEGREE OF B. S.

| | No. of ex.* per week. |
|------------------------------|--------------------------|
| French or German, - | 3 |
| Geology, - - - | 1 |
| Elocution, - - - | 1 |
| Mental Philosophy, - | 2 |
| Rhetoric and Composition, | 2 |
| Elective (Courses I. or II.) | 13 |
| | — |
| | 22 |
| | == |
| | — |

ELECTIVE COURSES.

I *Course in Engineering.*

| | |
|--------------------------|-----|
| Engineering, - - - | 3 |
| Mechanics, - - - | 3 |
| Graphics, - - - | 6=2 |
| Field and Shop Work, 6=2 | |
| Astronomy, - - - | 3 |

II. *Course in Chemistry.*

| | |
|-----------------------------|---|
| Chemical Technology, - | 3 |
| Quantitative Analysis, 18=6 | |
| Astronomy (3) or Latin, | 4 |

* Each Exercise occupies 45 minutes.

COURSES OF STUDY.

I.—COURSE IN MATHEMATICS.

FRESHMAN CLASS.—The Scientific Section takes Olney's Algebra through Quadratic Equations, Davies's Legendre's Geometry Books v-vi, and Chauvenet's Plane Trigonometry.

The Classical and Literary Sections take Olney's Algebra through Quadratic Equations, and Davies's Legendre's Geometry Books v-vi.

SOPHOMORE CLASS.—The Scientific Section takes Davies's Legendre's Geometry Books vii-ix, Olney's Differential and Integral Calculus.

The Classical and Literary Sections take Davies's Legendre's Geometry Books vii-ix, and Wheeler's Plane Trigonometry.

JUNIOR CLASS.—The Scientific Section takes Todhunter's Conic Sections, Olney's Higher Algebra, and Chauvenet's Spherical Trigonometry.

The Classical and Literary Sections may elect Mathematics.

SENIOR CLASS.—The Scientific Section takes Chauvenet's Spherical and Practical Astronomy.

Those in the Classical and Literary Sections, who are qualified, may elect this course.

II.—COURSE IN NATURAL HISTORY.

The instruction in this department consists of lectures and recitations, as follows:

1. Comparative Anatomy and Physiology.—A course of lectures extending through two years, once a week. Required of all the sections of the Freshman and Sophomore classes.

2. Botany.—Recitations and analysis of plants, one period per week first half year, and two periods per week last half year. Required of the Scientific Section of the Freshman Class, and of the Classical and Literary Sections of the Sophomore Class.

3. Botany, Mineralogy and Geology.—Lectures once a week last half year. These subjects are given in successive years. Required of all sections of the Freshman, Sophomore and Junior Classes.

The determination of minerals with the blow-pipe, is required of the Scientific Section of the Sophomore Class, and elective for others.

4. Geology.—Lectures and Recitations once a week throughout the year. Required of all sections of the Senior Class. Dana's Geology is used as a text-book.

The Museum of the College affords ample material for illustrating the instruction in this course.

III.—COURSE IN PHYSICS.

The instruction in this subject is as follows :

1. A course of lectures on Sound and Heat, two periods per week during the last half-year. It is preceded by a course in Elementary Mechanics of Solids, Liquids and Gases, two periods per week during the first half-year. (See course on Mechanics and Engineering, page 21.) Attendance upon these courses is required of the Scientific and Literary Sections of the Freshman Class, and of the Classical Section of the Junior Class.

2. A course of Lectures on Light, Electricity and Magnetism, two periods per week during the year. Attendance is required of the Scientific and Literary Sections of the Sophomore Class, and is elective with the Classical Section of the Senior Class.

3. A course of Laboratory work in Mechanical and Physical Measurements, two periods per week required of the Scientific Section of the Junior Class.

IV.—COURSE IN CHEMISTRY.

The instruction in Chemistry is as follows :

1. A course of lectures on Inorganic Chemistry and some of the Carbon Compounds, two periods per week during the year. Attendance is required of the Scientific Section of the Freshman Class, the Literary Section of the Sophomore Class, and the Classical Section of the Junior Class. In connection with this course of lectures, two periods per week of practice in the Laboratory are required of the Scientific students, and are elective for the others.

2. A course in Qualitative Chemical Analysis is required of the Scientific Section of the Sophomore Class, and is elective for others. It includes four periods of Laboratory practice per week, and one of lectures and recitations, during the first half-year.

3. Three periods of recitation per week during the first half-year from Cooke's Chemical Philosophy; followed during the second half-year by three lectures per week upon Organic Chemistry. Pinner's *Organische Chemie*. Required of the scientific students of the Junior Class who do not elect Engineering.

4. Lectures and Recitations three times a week in Chemical Technology. Required of the scientific students in the Senior Class who do not elect Engineering.

5. A course in Quantitative Chemical Analysis extending over two years, with twelve periods per week the first year and sixteen periods the second, is required of the scientific students in the Junior and

Senior Classes, who do not elect Engineering. It includes Gravimetric Analysis, Volumetric Analysis, the analysis of Minerals, Ores, Soils, Fertilizers, Commercial Products, Water Analysis, Organic Analysis, and Assaying. Seniors of the classical and literary sections may elect as much of this course as their time will permit.

In addition to the above regular work, we offer, for the benefit of those intending to teach, an opportunity to perform a series of experiments suitable to illustrate elementary instruction in Chemistry.

For the benefit of those who intend to study Medicine or Pharmacy after graduation, the course is modified so as to include the elements of Medical Chemistry. To such students, our regular scientific course, with its two years of Latin and three years of Chemistry, is especially recommended.

The new Laboratories for this department are constructed and fitted up in the most approved manner. They include a Laboratory for general Chemistry, one for Qualitative Analysis, one for Quantitative Analysis, one for Assaying and Metallurgy, a balance-room, store-rooms, &c.

Books of Reference.—Besides the scientific books in the College Library, about one hundred volumes of standard works on Chemistry and Physics are constantly accessible to students in this department.

V.—COURSE IN HISTORY.

This is a three years' course given in the Freshman, Junior, and Senior years.

1. In the Freshman year, Roman History, three times a week, is elective for the Classical and Literary Sections. Leighton's History of Rome is used as a text-book.

2. In the Junior year the work consists of a general survey of the Roman Empire, and the History of France. It is elective for the Classical and Literary Sections. Students' Gibbon and Students' History of France are used as text books.

3. In the Senior year Hallam's History of the Middle Ages is the text book during the first half-year; during the last half, Young's Government Class Book, a treatise on the principles of Government and Law.

In the regular class work, history is taught by lectures, recitations, and by frequent essays required of the students upon different historical subjects. In connection with their essays, students make constant reference to the biographical and classical dictionaries, encyclopedias, and larger histories in the College library. The students are urged to read such standard works as bear directly upon the great characters and events of the history which they study.

VI.—COURSE IN ENGLISH.

The instruction in this department consists of Lectures, Readings and Recitations, as follows :

1. Rhetoric and Composition, one exercise per week, with constant practice in writing essays. This work is required of all students throughout the entire four years.
2. A course of critical reading in authors of the Nineteenth century, twice a week, required of the Literary Section of the Freshman Class.
3. A course of critical reading in authors prior to the Nineteenth century, from Chaucer down, three times a week, and extending through three years. This course is required of the Literary Sections of the Sophomore, Junior and Senior Classes, and elective for other students in these classes.
4. A course of forty lectures on English Literature, extending over two years. Attendance upon these is required of all students of the Freshman and Sophomore Classes.

VII.—COURSE IN GERMAN.

The full course of instruction in this department extends through four years, two of which are required of candidates for the degree of A. B. or B. S., with the privilege of electing the remaining two. The study is required for the four years, of candidates for the degree of B. L. The course of study is as follows :

FIRST YEAR.—German Grammar, with constant practice in writing exercises; reading German ballads and easy prose; conversational exercises.

SECOND YEAR.—Stories—Aus dem Leben eines Taugenichts; German plays—Eigensinn, Einer muss heirathen etc.; exercise in writing German; conversation.

THIRD YEAR.—Schiller's Wilhelm Tell, Maria Stuart, etc.; dictation; writing; conversation.

FOURTH YEAR.—Goethe or Lessing; Schiller's Prose; studies in the history of German Literature; conversation and writing.

VIII.—COURSE IN FRENCH.

The full course in French extends over four years, with about one year's study required for admission. The work is arranged as follows :

FIRST YEAR.—Magill's Grammar; Fénelon's *Télémaque*. Required of all sections of the Freshman Class.

SECOND YEAR.—Magill's Grammar; Magill's Prose and Poetry. Elective for all sections of the Sophomore Class.

THIRD YEAR.—Magill's Grammar; Bôcher's College Series of Plays; Dumas's Napoleon, etc. Required of the Literary Section of the Junior Class; elective for the other sections.

FOURTH YEAR.—Magill's Grammar; Corneille's Cid; Racine's Athalie; Molière's Misanthrope, etc; Familiar Lectures in French on French Literature. Required of the Literary Section of the Senior Class, and elective for the other sections.

All the classes have regular practice in French conversation. An extra class is formed of the more advanced students. In this class all the instruction and explanations are given in French, the students joining in the critical discussion of the classics read.

IX.—COURSE IN MECHANICS AND ENGINEERING.

This course is especially intended to give a good preparation to those students who are expecting to become either Civil or Mechanical Engineers. The studies and exercises are so arranged that its graduates will be prepared to become immediately useful in the office, works, or field, in subordinate positions, and, after a fair amount of such practice, to design and to take charge of important works.

The College is well provided with the necessary field instruments, and each student is made familiar with their uses and management, by practical work in the field, carefully planned to illustrate the actual practice of the engineer.

The Draughting Room is large, well lighted, warmed, and ventilated, and is furnished with adjustable tables, models, drawings, etc.

The Mechanical Laboratory contains an Olsen's testing machine, arranged for tensile, compressive and transverse tests, and an excellent and complete assortment of tools, including screw-cutting engine lathes, speed-lathes, (simple and back-gear), an iron planer, a complete universal milling machine, a shaper, a twist drill grinder, an upright drill, emery grinder, etc., besides forges, and the many necessary small tools. Additions are constantly being made to this collection, as they are needed, either by manufacture in the laboratory or by purchase. Power is furnished by a four-horse power engine and boiler, the former fitted with an approved indicator, and the latter with the necessary attachments for determining its efficiency, etc.

Regular and systematic instruction is given in the use of tools, machinery, and processes. Patterns are made by the students from their own designs and drawings, of machines, or parts of machines, and the castings are made and properly fitted together and finished according to the drawings.

Although, as above stated, the course is especially intended for those who expect to become Engineers, such portions of it as may be pursued with advantage by others, whose time is limited and who do not intend to graduate, are open to them.

The details of the course vary somewhat from year to year, but, in general, are represented by the following arrangement of the studies :

FRESHMAN YEAR.—A course of recitations and lectures on the mechanics of solids, liquids, and gases, is given during the first half of the year, followed by Physics (see page 18) during the second half.

The Elements of Draughting, including the use of instruments, India ink and colors, followed by Elementary Projections, Elements of Structures, Shades and Shadows, and Isometrical Drawing, are taught as a required exercise to the Scientific Section of the class, and are elective for others. At the same time a more extended course in the same, with recitations, and the construction in wood and metal of models of the more difficult drawings is required of the Engineering students only.

This is followed by Surveying with the Chain and Compass, in the Spring.

SOPHOMORE YEAR.—Analytical Mechanics of Solids and Fluids is taught as a required study to the Scientific Section of the class, and as an elective to others, during the second half of the year.

Descriptive Geometry, including Shades, Shadows, and Perspective, and the careful construction of the more important problems, is required of Engineering Students, and is elective for others. It is followed in the Spring by Land Surveying, with Field Practice and Map Drawing. Instruction in the use of tools is begun, and Models illustrative of the problems in Descriptive Geometry are required to be made.

JUNIOR YEAR.—The Junior and Senior Classes are united during the remainder of the course, thus forming one Engineering Class, and the remaining studies and exercises of the course are so distributed as to occupy the two years, they being repeated during alternate years. The details are given under Senior Year.

SENIOR YEAR.—The following are the studies and exercises required of the Senior and Junior Classes :

1. *Engineering.*—Theory, Adjustment, and Use of Engineering Field Instruments ; Leveling ; Topographical, Triangular, and Hydrographical Surveying ; Theory and Practice of Road Engineering ; Building Materials ; Stability of Structures ; Foundations and Superstructures ; Bridge Construction.

2. *Applied Mechanics.*—Friction and other Resistances ; Stress and Strength of Materials ; Practical Hydraulics ; Practical Pneumatics ; General Theory of Machines ; Theory of Prime Movers, Steam Engines, Turbines, etc. ; Measurement of Power.

3. *Mechanism.*—Principles of Mechanism, of Machine Design, of the Transmission of Power ; Construction and use of Tools.

4. *Draughting*.—Stone-Cutting Problems; Topographical, Structure and Machine-Drawing; Plans, Profiles, and Sections of Road Surveys; Working Drawings.

5. *Practical Exercises* in the Field, in the early Fall and late Spring months; in Pattern Making and Casting in Brass, and general Machine-Shop Practice, including the Forging, Shaping, Tempering, Use and Care of Tools, the Filing, Turning, Planing, Boring etc. of Metals, the Finishing and Fitting up of Machines or parts of Machines, the Setting up, Testing, and Management of Steam Engines, Boilers and Machinery, throughout the year; with occasional visits to Mechanical Establishments, and to important engineering works in or near Philadelphia.

X.—COURSE IN ELOCUTION.

The demand for good speakers and readers in every sphere of life, is recognized in the attention given to this course. The aim is to give the student a broad and general culture in natural delivery, and a mastery of the laws underlying the art of expression. He is taught that *conversation*, the simplest form of human expression, is the basis of every kind of delivery.

In the culture of the speaking-voice, care is taken that it be natural, pure and full; that the articulation be correct and distinct; and that the expression be adapted to the sense.

The Discipline in Elocution consists in Physical Training; Respiration; Vocal Culture; with special attention to the Production of Tone and Quality of Voice; Phonic Analysis, Articulation and Orthoepy, and Public Exercises in Reading and Declamation throughout the College Course.

XI.—COURSE IN TEACHING.

This course is open to the members of all the College classes (being an Elective in each), as well as to special students.

In the Freshman and Sophomore Classes, there are at present two lectures per week, and two periods (with as many more as the pupil may desire), given to practice or observation.

In the Junior and Senior Classes, an additional amount of practice is required, making it equivalent to a six-period study.

Those who pursue this course for one or two years are entitled to a certificate showing the amount of work done in this department, as well as their progress in their college studies.

The Teachers' Diploma is given at graduation to those Bachelors of Arts, of Science or of Literature, who shall have elected as a part of their college-course, an amount of work in this department equivalent to six periods a week for two years.

XII.—COURSE IN LATIN.

The study of Latin is required of Classical Students during the four years of the College course.

In the Chemical course Latin is Elective with Mathematics in the Junior year, and with Astronomy in the Senior year. The third and fourth year's work is pursued together as a two years' course, by the Senior and Junior classes combined. The course of Instruction is as follows :

FIRST YEAR.—Harkness's Grammar and Latin Prose Composition ; Virgil's *Æneid* ; Livy.

SECOND YEAR.—Harkness's Grammar and Latin Prose Composition ; Cicero's Orations ; Livy.

THIRD YEAR.—Horace's Odes ; Cicero's *De Claris Oratoribus* ; *De Oratore*, *De Senectute*, and *De Amicitia*.

FOURTH YEAR.—Horace's Satires and Epistles ; Tacitus's *Agricola* and *Germania* ; Satires of Juvenal ; Selections from Lucretius.

XIII.—COURSE IN GREEK.

Greek is not a required study, but is Elective for students of the Classical course. Each year opportunity is offered for beginners in the language, and students who have previously studied it go on in advanced classes. The full course extends through four years, with three recitations per week. The course of Instruction is as follows :

FIRST YEAR.—Goodwin's Grammar ; Xenophon's *Anabasis*.

SECOND YEAR.—Fernald's Greek Historians ; Homer's *Iliad* or *Odyssey* ; Greek Prose Composition ; Goodwin's Greek Moods and Tenses.

THIRD YEAR.—Plato's *Phaedo* or *Apology* of Socrates ; *The Hecuba* or *Medea* of Euripides ; Greek Composition.

FOURTH YEAR.—The *Antigone* of Sophocles or the *Prometheus* of *Æschylus* ; Demosthenes on the Crown or Lysias or Isocrates ; History of Greek Literature (Lectures).

XIV.—COURSE IN MENTAL AND MORAL PHILOSOPHY.

The instruction in this department is given by lectures once a week, with occasional examinations. Attendance is required of all sections of the Senior class. The subject is presented historically, with outlines of the different schools of Philosophy.

Special Students, and others, not candidates for a degree, who shall complete one or more of the above courses of study, may receive

a certificate to that effect upon the recommendation of the Professors in charge of the departments specified.

POST GRADUATE STUDIES AND SECOND DEGREES.

Graduates of this and other Colleges are offered facilities for continuing their studies. They must arrange their hours and their work with the Professors in charge of the Departments which they propose to elect.

Such students, who continue their studies satisfactorily for two years, will receive the Master's Degree.

The Second Degrees are also conferred upon the following conditions:—

The Degree of A. M. will be given, three years after graduation, to all Bachelors of Arts who shall have engaged, during that period, in professional or literary studies, and who shall present an acceptable thesis.

The Degree of M. L. will be given, three years after graduation, to all Bachelors of Literature who shall have engaged, during that period, in professional or literary studies, and who shall present an acceptable thesis.

The Degree of M. S. will be given, three years after graduation, to all Bachelors of Science, who shall have engaged, during that period, in professional or scientific studies, and who shall present an acceptable thesis upon some scientific subject.

The Degree of C. E. will be given to all Bachelors of Science of the Engineering Department who shall have been engaged for not less than three years, in professional practice, in positions of responsibility, and who shall present an acceptable thesis upon a subject pertaining to Civil Engineering.

Applications for the Second Degree must be made, and the thesis presented at least *three months* before Commencement.

After 1884, all candidates for the Master's Degree will be required to pursue at Swarthmore or elsewhere, under the direction of the Faculty, a course of reading or study which shall occupy not less than two years, and to pass examinations in the same.

Upon application to the Faculty, the work will be assigned, and the student may present himself from time to time for examination in such parts of it as he may have completed.

At the Annual Commencement in 1881, the following Degrees were conferred :

BACHELOR OF ARTS.

GERTRUDE B. MAGILL,
EUGÈNE PAULIN, Jr.,

MARTHA REINOEHL,
ERNEST F. TUCKER.

BACHELOR OF LITERATURÉ.

MARTHA BUNTING,
WILLIAM CANBY, Jr.,
CHARLES B. DORON,

MARY J. ELLIOTT,
EMMA KIRK,
ALVIN T. SHOEMAKER.

BACHELOR OF SCIENCE.

EDWARD C. RUSHMORE,
HENRY B. SEAMAN,

CHARLES E. SHARPLESS,
I. BYRON THOMAS.

MASTER OF ARTS.

FRANCES LINTON, A. B., *of the Class of 1876.*
MARY WILLETS, M. D., *of the Class of 1876.*
MARY P. HALLOWELL, M. D., *of the Class of 1878.*
REBECCA S. HUNT, M. D., *of the Class of 1878.*

MASTER OF LITERATURE.

WILLIAM P. HOLCOMB, B. L., *of the Class of 1878.*

MASTER OF SCIENCE.

EDWARD H. KEISER, B. S., *of the Class of 1880.*

GENERAL INFORMATION.

SITUATION.

THE COLLEGE is situated on the Central Division of the P. W & B. Railroad, ten miles from Philadelphia. Cars leave the depot at Broad and Filbert Streets, Philadelphia, twelve times daily.

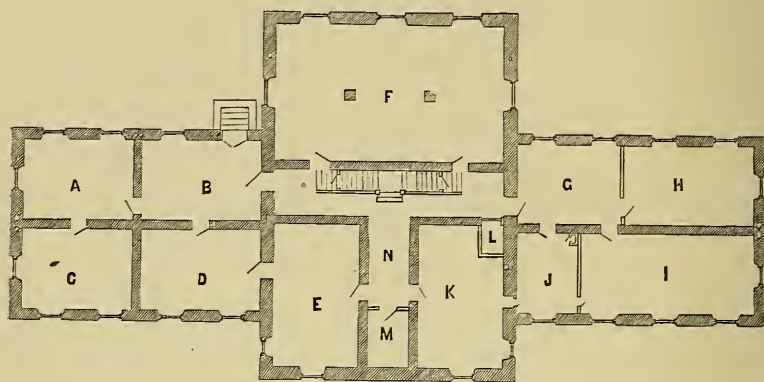
POST-OFFICE ADDRESS AND CITY OFFICE.

The Post-office address is SWARTHMORE, DELAWARE CO., PA. Express packages may be sent to this address, or, *if small*, may be left in care of Friends' Book Association, 1020 Arch Street, Philadelphia.

BUILDINGS AND GROUNDS.

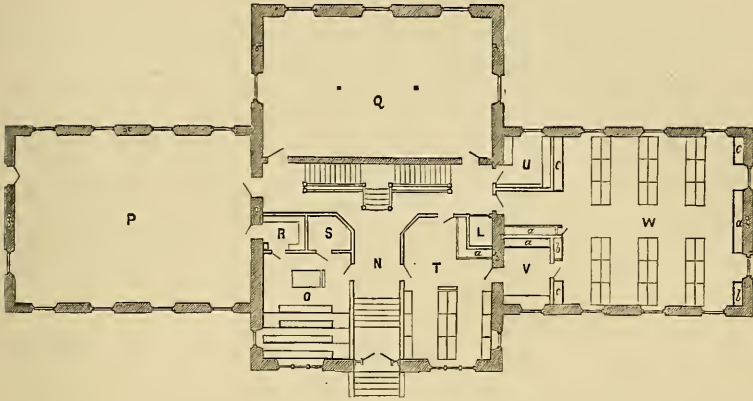
The College property contains 240 acres, of which about one-half is devoted to the farm, and the remainder consists of lawn and pleasure grounds. Crum Creek, which forms the west boundary of the property, furnishes excellent facilities for boating, bathing and skating. The Main Building, a massive stone structure 348 feet long and three stories high, containing the living rooms of the Students and Instructors, the Libraries and the Lecture and Recitation rooms, was recently destroyed by fire. The work of re-building will be completed by the beginning of the new college year. A few changes, suggested by twelve years of occupancy, have been made. These improvements will render the building even better adapted to its uses than it was before its destruction.

THE NEW SCIENTIFIC BUILDING has been completed during the present year, and will be fully equipped with the necessary apparatus and machinery, and made ready for occupancy by the opening of the new scholastic year, in the Ninth month, 1882. The building is constructed of stone in the most substantial manner, and was planned with particular reference to the work of our Scientific Department. The following floor plans will explain the arrangement of the several floors and the uses to which the rooms are to be put :



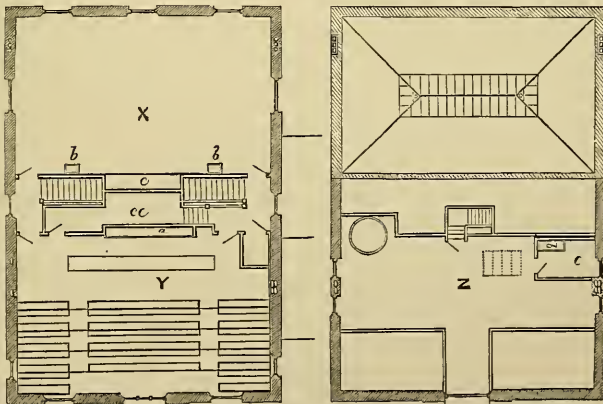
BASEMENT.

- A.* Blacksmith Shop, containing two complete sets of blacksmith's tools; forges, anvils, vises, &c.
- B.* Boiler Room and room for grinding and polishing, containing a vertical tubular boiler, and grindstone and emery wheels.
- C.* Brass Foundry, with its crucible furnace, oven for baking cores, founder's benches, &c.
- D.* & *E.* Communicating rooms devoted to wood working and pattern making; containing lathes, benches, &c.
- F.* One of the two rooms devoted to the Physical Laboratory, and intended for such apparatus as requires very solid foundations.
- G.* Unpacking room of the Chemical Department.
- H.* Store-room.
- I.* Laboratory for beginners in Chemistry.
- J.* Room for chemical stores and supplies, communicating with *I* and *K* by windows, and with the general laboratory above by a dumb-waiter.
- K.* Metallurgical Laboratory, which contains also the gasometers for supplying the laboratories and lecture room with Oxygen and Hydrogen gases.
- L.* Elevator running from basement to second floor.
- M.* Battery Room, from which wires lead to other rooms.
- N.* Hall and Stairway.



FIRST FLOOR.

- O.* Engineering Lecture and Recitation Room.
P. Mechanical Laboratory and Machine Shop, containing all the tools and appliances generally found in first-class machine shops. Power is obtained by an engine driven by steam either from the main college boilers or from the shop boiler at pleasure.
Q. Physical Laboratory for experimentation and research.
R. Wardrobe. *S.* Engineering Field Instruments, &c.
T. Quantitative Laboratory with all necessary appliances.
U. Balance Room and Chemical Library.
V. Private Laboratory of the Professor of Chemistry.
W. General or Qualitative Laboratory. *a* Hoods, some containing sinks, others not. *b* Sinks. *c* Closets.



SECOND FLOOR AND ATTIC.

- X. Drawing Room, lighted by a skylight and by large North windows.
 Y. Lecture Room, with large hood and lecture table, supplied with water, gas, electricity, Oxygen and Hydrogen.
 Z. Photographic Room, with North skylight and dark room. *a* Hood. *b* Sinks. *c* Closets. *cc* Apparatus Room.

The other buildings are a commodious Meeting House, recently built through the generous liberality of a member of the Board of Managers, the President's house, the West House (birth-place of Benjamin West), now used as a Professor's residence, the Farmer's house, and commodious farm buildings, and the Laundry and Bakery, containing also the Root sectional boilers for heating and cooking purposes. All the buildings are constructed of stone.

LIBRARIES.

The General Library destroyed by the fire, contained upwards of 3600 volumes of works generally selected by the Professors and Instructors at the heads of the various departments of study, and it was in consequence a valuable working collection.

The most immediately useful books will be replaced before the end of the present college year, and be catalogued and arranged in the new Library Room during the summer preparatory to the opening of the new year.

Friends' Historical Library of Swarthmore, founded by Anson Lapham, was not destroyed. It contains a small but increasing collection of Friends' books, photographs of representative Friends, and manuscripts relating to the Society and its history, and is at all times accessible to teachers, students, and members of the household.

READING ROOM.

The Reading Room, supplied with the leading Literary and Scientific journals, and the prominent newspapers of the principal cities, is open to students at all times except during the regular hours for study and recitations.

LITERARY SOCIETIES.

There are three Literary Societies maintained by the students, two for young men, and one for young women. These hold regular meetings for the reading of Essays, etc., and for practice in debates. Their Libraries, under their own management, contain over twelve hundred volumes, and are accessible to all of the College students.

A Scientific Society is also maintained by the students interested in Science.

MUSEUM.

The extensive collections which the college possessed in Geology, Zoology, Mineralogy, and Botany, were entirely destroyed by the fire.

Under the direction of the Curator, Dr. Joseph Leidy, aided by the generosity of interested friends, steps are being taken to replace the collection as rapidly as possible. Contributions of money or material for this purpose should be sent to *Dr. Joseph Leidy, Swarthmore, Pa.*

PHYSICAL CULTURE.

Regular daily exercise in the open air is encouraged, for which the extensive grounds connected with the College afford ample facilities. The Gymnasium, under the care of the Students' Athletic Association, is open at certain hours each day for the exercises of the boys and young men; and a large airy room in the Main Building is set apart for the exercises of the girls and young women.

RELIGIOUS EXERCISES.

While care is taken to inculcate the doctrine that religion is a matter of practical daily life, and is not confined to the observance of set forms or the promulgation of religious tenets, the regular assembling for religious purposes is carefully observed. On First-day morning a religious meeting is held, attended by students, teachers, and members of the household, and occasionally by visiting Friends. The meeting is preceded by First-day school exercises, consisting of the recitation of passages of Scripture prepared by members of the different classes, and the reading of a portion of Scripture at the close. The daily exercises are opened by a general meeting for reading selected portions of Scripture, or other suitable books, and imparting such moral lessons as circumstances seem to require, followed by a period of silence before entering upon the duties of the day.

VISITING AND LEAVE OF ABSENCE.

Students should not be visited at the College on the FIRST DAY OF THE WEEK.

Leave of absence cannot be granted without a written request from parents or guardians, which request should, in all cases, be accompanied by reasons satisfactory to the Faculty.

Students may be visited, on week-days, by parents or guardians, or by near relatives, or others approved by parents or guardians; but general visiting is discouraged. *Students must not be interrupted in their studies or recitations at any time.*

All persons who are interested in education, and who are desirous of examining the methods of instruction and discipline at Swarthmore, will be welcomed at any time, and should, when convenient, communicate with the President upon the subject in advance.

COMMENCEMENTS AND VACATIONS.

The College year begins on the second Third-day of Ninth month, and closes with Commencement-day, which occurs on the third Third-day of Sixth month.

Students are not admitted for a period terminating earlier than the current College year, but when vacancies exist, may enter at any time during the year.

Besides the summer vacation there will be a vacation of one week at the close of the Twelfth month.

Students are permitted to remain at the College, under care, during the recess, but not during the summer vacation.

OUTFIT.

Although no form of dress is prescribed for either sex, such simple attire as is appropriate to school life is earnestly recommended. Earrings, bracelets, necklaces, and elaborately trimmed dresses are prohibited.

Students should be supplied with six towels, six napkins, two clothes-bags, a wrapper, slippers, umbrella, and the requisite toilet articles. Every article must be marked with the full name of the owner.

USE OF TOBACCO.

The use of Tobacco being strictly prohibited, those addicted to its use, unless prepared to renounce it entirely, should not apply for admission.

EXPENSES.

FOR RESIDENT STUDENTS the price of board and tuition is \$450 per year, of which \$250 is payable in advance, and \$200 on the first of First month. A proportionate deduction is made to those students who enter after the opening of the College year.

A deduction of \$100 per annum is made from the above charges to all students who are children of members of the Religious Society of Friends.

For Day Scholars the price is \$200 per year, of which one-half is payable in advance, and the remainder on the first of First month. The day scholars dine with the resident students.

A deduction of \$50 per annum is made from these charges to all students who are children of members of the Religious Society of Friends.

Books are furnished for the use of students without expense, but they buy their own stationery and drawing implements. Students in Practical Chemistry pay for the chemicals which they use in the Laboratory. No additional charge is made in case of sickness unless a physician is employed.

THERE ARE NO EXTRA CHARGES.

The price being made as low as experience shows to be compatible with prudence, while many of our expenses are annual in their character, and teachers and other officers at fixed yearly salaries must be

engaged in proportion to the number of students entered, we cannot, in case of withdrawal, return the full proportionate amount paid, without loss. When the connection of a student with the College shall terminate before the end of the period for which payment has been made, by sickness, or any other cause approved by the Faculty, the student may have the privilege of sending an approved substitute, for the unexpired term, or may apply, in writing, to the Treasurer, and a return will be made of two-thirds of the amount pre-paid, from the date of said application or written notice that the place is vacated.

PAYMENTS.

Payments are to be made by check or draft to the order of
ROBERT BIDDLE, TREASURER,
No. 511 COMMERCE STREET, PHILADELPHIA.

STUDENTS.

SENIOR CLASS.

| <i>Names.</i> | <i>Sections.</i> | <i>Residences.</i> |
|-----------------------------------|------------------|----------------------------------|
| Baner, W. Llewellyn, | Cl. . | <i>New York, N. Y.</i> |
| Blackwell, Edith, | Cl. . | <i>Sommerville, N. J.</i> |
| Brewster, Charlotte E., | Lit. . | <i>Rahway, N. J.</i> |
| Butler, William, Jr., | Cl. . | <i>West Chester, Pa.</i> |
| Cochran, C. Herbert, | Cl. . | <i>Street Road, Pa.</i> |
| Cooper, Bertha, | Lit. . | <i>Phoenixville, Pa.</i> |
| Foulke, P. Fannie, | Cl. . | <i>Buckingham, Pa.</i> |
| Gale, Mary E., | Cl. . | <i>Laconia, N. H.</i> |
| Green, Sarah S., | Cl. . | <i>Media, Pa.</i> |
| Hallowell, Margaret E., | Cl. . | <i>Philadelphia, Pa.</i> |
| Hart, Elizabeth E., | Lit. . | <i>Doylestown, Pa.</i> |
| Haslam, Elizabeth, | Lit. . | <i>Atglen, Pa.</i> |
| Ogden, Elizabeth M., | Lit. . | <i>West Chester, Pa.</i> |
| Palmer, Charles, | Cl. . | <i>Concordville, Pa.</i> |
| Phillips, George C., | Eng. . | <i>Philadelphia, Pa.</i> |
| Rossiter, Horace L., | Cl. . | <i>Springhouse, Pa.</i> |
| Turton, Charles B., | Sc. . | <i>New York, N. Y.</i> |
| Weaver, Gerrit H., | Cl. . | <i>Philadelphia, Pa.</i> |
| Wilson, Emily E., | Cl. . | <i>Lincoln, Va.</i> |
| Zavits, Edgar M., | Cl. . | <i>Coldstream, Ont., Canada.</i> |

Seniors—20.

JUNIOR CLASS.

| <u>Names.</u> | <u>Sections.</u> | <u>Residences.</u> |
|-------------------------------|------------------|--------------------|
| Bunting, Charles A., . . . | Eng. | Sharon Hill, Pa. |
| Cochran, John L., . . . | Eng. | Folly's Mills, Va. |
| Conrow, Edgar, . . . | Lit. | Cinnaminson, N. J. |
| Green, Lydia S., . . . | Cl. | Media, Pa. |
| Hanes, Florence N., . . . | Cl. | Woodstown, N. J. |
| Hawkins, Vallandigham, . . | Cl. | Fawn Grove, Pa. |
| Jackson, Alice W., . . . | Cl. | Wilmington, Del. |
| Kissam, William A., Jr., . . | Eng. | Little Neck, L. I. |
| Matlack, Bertha, . . . | Lit. | Camden, N. J. |
| Miller, Guion, . . . | Cl. | Sandy Spring, Md. |
| Mitchell, S. Duffield, . . . | Cl. | West Chester, Pa. |
| Pennock, Edward A., . . . | Cl. | London Grove, Pa. |
| Pennock, George L., . . . | Eng. | Philadelphia, Pa. |
| Pyle, Helen C., . . . | Cl. | Wilmington, Del. |
| Seaman, Frederick A., Jr. . . | Sc. | Madison, N. J. |
| Tylor, Annie E., . . . | Lit. | Denton, Md. |
| Verree, James E., . . . | Lit. | Verreeville, Pa. |
| Webb, Emma, . . . | Cl. | Philadelphia, Pa. |
| Wood, Louise C., . . . | Lit. | Swarthmore, Pa. |

Juniors—19.

SOPHOMORE CLASS.

| <u>Names.</u> | <u>Sections.</u> | <u>Residences.</u> |
|------------------------------------|------------------|----------------------------|
| Caldwell, Frank G., | Sc. | <i>Philadelphia, Pa.</i> |
| De Normandie, Myra F., | Cl. | <i>Kingston, Mass.</i> |
| Dill, William R., | Irreg. | <i>Richmond, Ind.</i> |
| Dilworth, Horace L., | Sc. | <i>Centreville, Del.</i> |
| Downing, Rebecca M., | Lit. | <i>Philadelphia, Pa.</i> |
| Furnas, John D., | Sc. | <i>Waynesville, Ohio.</i> |
| Hall, Sarah L., | Cl. | <i>Philadelphia, Pa.</i> |
| Hallowell, William P., Jr. | Sc. | <i>Philadelphia, Pa.</i> |
| Hancock, Henry J., | Cl. | <i>Philadelphia, Pa.</i> |
| Haviland, Edwin, Jr., | Sc. | <i>New York, N. Y.</i> |
| Hoopes, Russell, | Irreg. | <i>West Chester, Pa.</i> |
| Hughes, Mary E., | Cl. | <i>Hughesville, Va.</i> |
| Hutton, Camilla R., | Irreg. | <i>Richmond, Ind.</i> |
| Lynde, Francis E. P., | Irreg. | <i>Philadelphia, Pa.</i> |
| Moore, Frederick P., | Cl. | <i>Sandy Spring, Md.</i> |
| Morey, Nettie E., | Cl. | <i>Nassau, N. Y.</i> |
| Satterthwaite, Laura H., | Cl. | <i>Trenton, N. J.</i> |
| Taylor, Frederick J., | Sc. | <i>Kennett Square, Pa.</i> |
| White, Elizabeth, | Lit. | <i>Denton, Md.</i> |
| Willets, Mary, | Cl. | <i>Jericho, L. I.</i> |

Sophomores—20.

FRESHMAN CLASS.

| <i>Names.</i> | <i>Sections.</i> | <i>Residences.</i> |
|---------------------------------|------------------|----------------------------|
| Albertson, Ella, | Cl. | <i>Glen Head, L. I.</i> |
| Baker, Minnie F., | Cl. | <i>Easton, N. Y.</i> |
| Bowne, William H., | Sc. | <i>Glen Cove, L. I.</i> |
| Browning, Noah H., | Cl. | <i>Chatham, N. Y.</i> |
| Churchman, Philip Q., | Cl. | <i>Wilmington, Del.</i> |
| Cochran, Joseph D., | Irreg. | <i>Folly's Mills, Va.</i> |
| Dixon, Mary G., | Lit. | <i>Easton, Md.</i> |
| Gleim, Lottie J., | Cl. | <i>Lebanon, Pa.</i> |
| Guthrie, Lizzie A., | Irreg. | <i>Titusville, Pa.</i> |
| Harbaugh, Annie S., | Irreg. | <i>Sewickley, Pa.</i> |
| Hizar, Emma J., | Lit. | <i>Wilmington, Del.</i> |
| Hoopes, Anna W., | Lit. | <i>Newcastle, Del.</i> |
| Hoopes, Mary C., | Lit. | <i>Newcastle, Del.</i> |
| King, Jesse M., | Sc. | <i>Springfield, Mass.</i> |
| Malcolm, Sarah J., | Cl. | <i>Jericho, L. I.</i> |
| Mather, Eleanor, | Lit. | <i>Philadelphia, Pa.</i> |
| Morgan, Elizabeth, | Lit. | <i>Phoenixville, Pa.</i> |
| Pratt, Mary D., | Cl. | <i>West Chester, Pa.</i> |
| Richardson, Anna B., | Irreg. | <i>Wilmington, Del.</i> |
| Schooley, John C., | Irreg. | <i>Hunting Hill, Md.</i> |
| Smedley, Samuel, Jr., | Sc. | <i>Media, Pa.</i> |
| Thornton, Samuel S., | Irreg. | <i>Byberry, Pa.</i> |
| Whitson, Mary E., | Cl. | <i>Jamaica, L. I.</i> |
| Wilbur, Charles E., | Irreg. | <i>North Easton, N. Y.</i> |
| Woodward, Archie B., | Sc. | <i>Philadelphia, Pa.</i> |

Freshmen—25.

SUMMARY.

| | |
|----------------------|-------|
| Seniors | 20 |
| Juniors | 19 |
| Sophomores | 20 |
| Freshmen | 25 |
| | <hr/> |
| Total, | 84 |

SUMMARY BY STATES.

| | |
|---------------------------|-------|
| Pennsylvania | 39 |
| New York | 13 |
| Delaware | 8 |
| New Jersey | 7 |
| Maryland | 6 |
| Virginia | 4 |
| Indiana | 2 |
| Massachusetts | 2 |
| New Hampshire | 1 |
| Ohio | 1 |
| Ontario, Canada | 1 |
| | <hr/> |
| Total | 84 |

GRADUATES.*

CLASS OF 1873.

| | | |
|--|-----------|-------------------------------|
| Sarah H. Acton, A.B. | | <i>Salem, N. J.</i> |
| Helen Magill, A.B., Ph.D. (Boston University, 1877). | | <i>Swarthmore, Pa.</i> |
| Elizabeth C. Miller, A.B. | | <i>Swarthmore College.</i> |
| Esther T. Moore, A.B. | | <i>Swarthmore College.</i> |
| † Maria C. (Pierce) Green, A.B. | | <i>Swarthmore College.</i> |
| Lowndes Taylor, A.B. | | <i>Colorado Springs, Col.</i> |

CLASS OF 1874.

| | | |
|---------------------------------------|-----------|--------------------------|
| Ellen H. (Evans) Price, A.B. | | <i>Philadelphia, Pa.</i> |
| Amy W. (Hall) Hickman, A.B. | | <i>West Chester, Pa.</i> |
| † Alfred T. Haviland, B.S. | | <i>Millbrook, N. Y.</i> |
| Mary (Hibbard) Thatcher, A.B. | | <i>Hulmeville, Pa.</i> |
| Herman Hoopes, B.S., C.E., 1879 | | <i>Philadelphia, Pa.</i> |
| Ferris W. Price, A.B. | | <i>Philadelphia, Pa.</i> |
| Elizabeth S. (Woolston) Collins, A.B. | | <i>Bristol, Pa.</i> |

CLASS OF 1875.

| | | |
|---------------------------------|-----------|--------------------------|
| John B. Booth, A.B. | | <i>Chester, Pa.</i> |
| Helen T. Comly, A.B. | | <i>Philadelphia, Pa.</i> |
| Franklin H. Corlies, B.S. | | <i>Philadelphia, Pa.</i> |
| † Herbert G. Dow, A.B. | | <i>Brooklyn, N. Y.</i> |
| Lizzie (Hanes) Taylor, A.B. | | <i>Woodstown, N. J.</i> |
| Edith R. (Hooper) Roberts, A.B. | | <i>Titusville, Pa.</i> |
| Barton Hoopes, Jr., B.S. | | <i>Philadelphia, Pa.</i> |
| † Oliver Keese, Jr., B.S. | | <i>Titusville, Pa.</i> |
| J. Reece Lewis, B.S. | | <i>Media, Pa.</i> |
| Howard W. Lippincott, A.B. | | <i>Philadelphia, Pa.</i> |

* Graduates and other former members of the College are requested to send their present addresses to the REGISTRAR at the College, and to keep him informed of any changes in the same as they occur.

† Deceased.

- Martha (McIlvain) Eastwick, A.B. . . . *Philadelphia, Pa.*
 John K. Richards, A.B., LL.B., (Harvard,
 1879) *Ironton, Ohio.*
 William H. Ridgway, B.S., C.E., 1879 . . . *Coatesville, Pa.*

CLASS OF 1876.

- Frank L. Bassett, B.S., D.D.S. (Philada.
 Dental College, 1878) *Philadelphia, Pa.*
 Arthur W. Bradley, A.B. *Philadelphia, Pa.*
 Frances Linton, A.B., A.M., 1881 . . . *Swarthmore Col.*
 Elizabeth J. Longstreth, A.B. *Sharon Hill, Pa.*
 James T. McClure, B.S. *Pittsburg, Pa.*
 Emma McIlvain, A.B. *Philadelphia, Pa.*
 Edwin Mitchell, Jr., A.B. *Providence, R. I.*
 Lucy R. Price, A.B. (1880) *West Chester, Pa.*
 Isaac G. Smedley, B.S., M.D. (Hahneman
 Med. Col., 1879) *Philadelphia, Pa.*
 Herbert W. Smyth, A.B. *Heidelberg, Germany.*
 Mary Willets, A.B., A.M., 1881, M.D. (Wo-
 men's Med. Col., of Phila., 1881) . . . *Philadelphia, Pa.*
 William P. Worth, B.S. *Coatesville, Pa.*

CLASS OF 1877.

- Joseph T. Bunting, B.S., LL.B. (Univ. of
 Penna., 1880) *Philadelphia, Pa.*
 Norman B. Corson, A.B. *Norristown, Pa.*
 Eudora Magill, A.B. *Swarthmore, Pa.*
 Jesse R. Norton, A.B. *Ironton, O.*
 Carroll R. Williams, A.B., LL.B. (Univ.
 of Penna., 1880) *Philadelphia, Pa.*
 Florence M. Yeatman, A.B. *Fairville, Pa.*

CLASS OF 1878.

- Caroline E. Burr, A.B. *Germantown, Pa.*
 Maybell P. Davis, A.B. *Providence, R. I.*
 Howard Dawson, A.B. *Boston, Mass.*
 Lacy A. Gleim, A.B. *Lancaster, Pa.*
 William J. Hall, B.S. *West Chester, Pa.*
 Mary P. Hallowell, A.B., A.M., 1881, M.D.
 (Women's Med. Col. of Phila., 1881) . . *Davis Grove, Pa.*

| | |
|---|------------------------------------|
| Charles A. Hawkins, A.B. | Fawn Grove, Pa. |
| William Penn Holcomb, B.L., M.L., 1881, | Swarthmore College. |
| Rebecca S. Hunt, A.B., A.M., 1881, M.D. | |
| (Women's Med. Col. of Phila., 1881) | Philadelphia, Pa. |
| Anna E. Jackson, A.B. | Kennett Square, Pa. |
| Llewellyn H. Johnson, B.S. | Orange, N. J. |
| Edward Martin, A.B. | Univ. of Penna., Phila. |
| Francis J. Palmer, B.S. | Brooklyn, L. I. |
| Israel Roberts, B.S. | Fellowship, N. J. |
| William Seaman, B.S. | Kinzua Viaduct, Brad- ford, Pa. |
| C. Harry Shoemaker, B.S. | Philadelphia, Pa. |

CLASS OF 1879.

| | |
|--|---------------------|
| Isaac R. Coles, B.S., C.E., 1880, | Glen Cove, N. Y. |
| William P. Fender, A.B. | Philadelphia, Pa. |
| William Lea Ferris, A.B. | Wilmington, Del. |
| Joseph Fitch, A.B. | Flushing, L. I. |
| Ruth Anna Forsyth, A.B. | Crosswicks, N. J. |
| Elizabeth Furnas, B.L. | Springboro, Ohio. |
| P. Lesley Hopper, A.B. | Havre de Grace, Md. |
| Marie A. Kemp, A.B. | Harrisburg, Pa. |
| Elisha E. Lippincott, B.S. | Red Bank, N. J. |
| Samuel Craig McComb, B.S. | Reading, Pa. |
| Charles R. Miller, B.L., LL.B., (University of Penna., 1881,) | Philadelphia, Pa. |
| Josephine White, A.B. | Yardleyville, Pa. |
| Abby M. Woodnutt, B.L. | Philadelphia, Pa. |

CLASS OF 1880.

| | |
|-------------------------------------|------------------------------------|
| Anne E. Constable, A.B. | Philadelphia, Pa. |
| Florence Hall, A.B. | Pottsville, Pa. |
| Myra T. Hillman, A.B. | Washington, D. C. |
| Emily L. Hough, A.B. | Minneapolis, Minn. |
| Edward H. Keiser, B.S., M.S., 1881, | Johns Hopkins Univ., Balt., Md. |
| Georgeine Kurtz, A.B. | Reading, Pa. |
| Albert R. Lawton, A.B. | New York, N. Y. |
| Robert J. Marcher, B.S. | High Bridge, N. Y. |
| Thomas L. Moore, A.B. | Sandy Spring, Md. |

| | | |
|-------------------------|---------|--------------------------|
| Ellen M. Preston, A.B. | | <i>Philadelphia, Pa.</i> |
| John Turton, B.S. | | <i>New York, N. Y.</i> |
| Fannie A. Willets, A.B. | | <i>Trenton, N. J.</i> |
| Henry S. Wood, B.S. | | <i>Philadelphia, Pa.</i> |

CLASS OF 1881.

| | | |
|----------------------------|---------|---|
| Martha Bunting, B.L. | | <i>Sharon Hill, Pa.</i> |
| Wm. Canby, Jr., B.L. | | <i>Mt. Washington, Md.</i> |
| Charles B. Doron, B.L. | | <i>Germantown, Pa.</i> |
| Mary J. Elliott, B.L. | | <i>Philadelphia, Pa.</i> |
| Emma Kirk, B.L. | | <i>Bryn Mawr, Pa.</i> |
| Gertrude B. Magill, A.B. | | <i>Swarthmore, Pa.</i> |
| Eugene Paulin, Jr., A.B. | | <i>Harvard University, Cambridge, Mass.</i> |
| Martha E. Reinöehl, A.B. | | <i>Lebanon, Pa.</i> |
| Edward C. Rushmore, B.S. | | <i>Cookesburg, N. Y.</i> |
| Henry B. Seaman, B.S. | | <i>Brooklyn, N. Y.</i> |
| Charles E. Sharpless, B.S. | | <i>Media, Pa.</i> |
| Alvin T. Shoemaker, B.L. | | <i>Baltimore, Md.</i> |
| J. Byron Thomas, B.L. | | <i>Cheyney, Pa.</i> |
| Ernest F. Tucker, A.B. | | <i>Harvard University, Cambridge, Mass.</i> |

Officers of the Alumni Association.

INCORPORATED 1882.

PRESIDENT,

JOHN B. BOOTH, *Chester, Pa.*

VICE-PRESIDENTS,

P. LESLEY HOPPER, *Havre de Grace, Md.*

HELEN MAGILL, *Swarthmore, Pa.*

FRANCES A. WILLETS. *Trenton, N. J.*

TREASURER,

WILLIAM J. HALL, *Box 681, West Chester, Pa.*

EXECUTIVE COMMITTEE,

HERMAN HOOPES, (Chairman), *510 Minor St., Philadelphia, Pa.*

ELLEN M. PRESTON, *3205 Baring St., Philadelphia, Pa.*

ABBY M. WOODNUTT. *Philadelphia, Pa.*

SECRETARY,

CAROLINE M. BURR, *East Johnson St., Germantown, Pa.*

RECORDER,

HERMAN HOOPES, *510 Minor St., Philadelphia, Pa.*

PREPARATORY SCHOOL.

GENERAL STATEMENT.

This school is intended to prepare students for the Freshman Class in the College, or to furnish a good practical education to those desiring a shorter course.

The students of the Preparatory School are under the same general management as the College classes. With a few exceptions, the same general rules are applicable to both, and the students of this School receive instruction from teachers employed especially for this purpose, and also from professors and instructors of the College.

CONDITIONS OF ADMISSION.

Applicants for admission must be at least thirteen years old, and should submit to the President, from their last teacher, satisfactory testimonials of good moral character. To secure places, applications for the next scholastic year should be made, as early as possible, by letter to the President.

Examinations for classification will be held on Third, Fourth, and Fifth days, the 12th, 13th, and 14th of Ninth month, 1882. Candidates must present themselves at three o'clock P. M. on Third-day, the 12th of Ninth month.

Candidates for admission to the lowest class will be examined in the fundamental rules of Arithmetic and United States money, in the Geography of the United States, and in Reading and Spelling.

EXPENSES, ETC.

After Ninth month, 1882, the price of Board and Tuition will be as follows:

| | |
|--|---------------------|
| Class C, | \$300 00 per annum. |
| Classes B, A, and College Preparatory, | 350 00 " |

of which \$200 is payable in advance, and the balance on the first of First month. A proportionate deduction is made to those students who enter after the opening of the College year.

A reduction of \$100 per annum is made from these charges, to all pupils who are children of members of the Religious Society of Friends.

For Day-Scholars the charge is \$150 a year, and \$100 a year to children of members of the Religious Society of Friends. They dine with the resident students.

Books are furnished for the use of students without expense, but they buy their own stationery and drawing implements.

The above prices may be depended upon as covering all necessary expenses, as

THERE ARE NO EXTRA CHARGES.

COURSE OF STUDY.

In rearranging the course of study for this school, we have given more prominence to the study of English, and have also had in view a complete and harmonious organization of all Friends' Schools throughout the country; and it is hoped that committees and teachers of these schools will unite with us in securing this very important end. In all Friends' Schools whose grade is so adjusted that certain classes, in the judgment of the Faculty, correspond with ours, students who complete the course of study in any class will be admitted to the class in Swarthmore corresponding with the next higher in their own school, without re-examination, on presenting certificates to that effect from the Principals of their respective schools.

STUDIES OF THE FIRST YEAR.

CLASS C.

Arithmetic.—Common Fractions, Denominate Numbers and Decimals; Exercises in Mental Arithmetic.

English Language.—Sentence-making; use of Capitals; Analysis of simple sentences; all forms of the Noun, Pronoun and Verb; Composition; Short Poems committed to Memory; Practice in the oral repetition of short stories read to the class.

Reading.—Practice in Reading and Declaiming before the class.

Spelling.—Selected words from the Reading lessons; writing sentences from Dictation; Correction of misspelled words in all written exercises of the class.

History.—Familiar Lectures on the History of the United States.

Geography.—Mathematical and Physical Geography; Descriptive and Political Geography of North and South America; Map Drawing.

Natural History.—Oral Lessons ; the classes of Vertebrates illustrated by a study of some of the representatives of each class ; followed by a more particular study of mammals and birds.

Writing.—The Spencerian System.

Drawing.—Smith's Free Hand course.

STUDIES OF THE SECOND YEAR.

CLASS B.

Arithmetic.—Percentage and its applications ; Partnership ; Ratio and Proportion.

Algebra.—Addition, Subtraction, Multiplication and Division ; Simple Equations ; Fractions.

English Language.—Practice in Composition ; Essential Principles of the Grammar ; Analysis of Sentences ; the parts of Speech ; Poems and Prose committed to memory.

Reading.—Practice in Reading and Declaiming before the class.

Spelling.—Selected Words ; Dictation Exercises ; Correction of misspelled words in all written exercises.

History.—Lectures on the History of the United States.

Geography.—Review of the Geography of North and South America ; the Geography of Europe, Asia, Africa and Oceanica.

Natural History.—Oral Lessons ; Review of the work of the preceding year ; Reptiles, Batrachians and Fishes.

Latin.—Harkness's Latin Grammar and Reader ; Cæsar Begun.

Writing.—The Spencerian System.

Drawing.—Smith's Free Hand books and outline from the solid.

STUDIES OF THE THIRD YEAR.

CLASS A.

Mathematics.—Algebra to Quadratics ; Geometry (Wentworth's) Books I. and II.

English Language.—Composition ; Grammar ; Poems and Prose read critically and committed to memory.

Reading.—Practice in Reading and Declaiming before the class.

Spelling.—Selected words ; Dictations ; Correction of misspelled words in all the written exercises of the class.

History.—Lectures on English History, with a text-book for reading and reference.

Natural History.—Physical Geography and the Elements of Geology.

Physics.—Lectures on Elementary Physics, with a text-book for reading and reference.

French.—Magill and Paulin's First Lessons in French ; Magill's French Reader.

Latin.—Harkness's Latin Grammar ; Harkness's Latin Prose Composition, Part I. ; Cæsar's Gallic War,

Or English Etymology.

Writing.—The Spencerian System.

Drawing.—Croasdales Geometrical Drawing Books ; outline and crayon shading from the solid.

STUDIES OF THE FOURTH YEAR,

COLLEGE PREPARATORY CLASS.

Mathematics.—Geometry through Book IV. ; Review of Arithmetic ; Algebra through Quadratic Equations of one unknown quantity.

English Language.—Rhetoric and Composition ; Prose and Poetry read critically and committed to memory ; a brief outline of the History of English Literature.

Reading.—Practice in Reading and Declaiming before the class.

Spelling.—Selected words and Dictation Exercises ; Correction of misspelled words in written exercises.

History.—Lectures, embracing a general view of Ancient History, and the History of Greece ; Review of the History of England and the United States.

Natural History.—During the first Half-Year, Human Anatomy, Physiology and Hygiene ; during the Second Half-Year, study

from pictures and living Plants of the stem, root, leaf, flower and fruit ; Physiology of Plants; practice in describing Plants ; collecting and naming specimens.

Chemistry.—Lectures on Chemistry.

Astronomy.—Descriptive Astronomy, with practice in finding the constellations and the principal stars.

Writing.—The Spencerian System.

Drawing.—Linear Perspective, and shading from the solid.

French.—Magill's Grammar and Reader.

Latin.—Harkness's Grammar ; Harkness's Prose Composition, Review of Part I., and the first thirty lessons in Part II., Virgil's *Æneid*, Books I.-IV.

Instead of Latin, students may elect German and Draughting as follows :

German.—Grammar and Practice in writing Exercises ; Ballads and easy Prose.

Draughting.—Use of Instruments, India Ink and Colors ; construction of Plane Problems in Geometry.

Students in Class A and the College Preparatory Class may elect the Theory and Practice of Teaching. Such students, who expect to teach the following year, may substitute for a part of the regular work, a thorough review of Arithmetic and the other elementary branches usually included in the examination of teachers for the public schools.

The following table shows the number of exercises per week for each class ; the periods being forty-five minutes each. In the younger classes, where a large proportion of the work is done in the class-room, the number of exercises is greater, and diminishes as the pupils become older and better able to prepare their work out of class. Most of the studies are required of all, as experience has clearly shown that young students make much more satisfactory progress when pursuing a regularly required course, even for a single year, without any idea of graduation, than when they select all their studies for themselves.

PERIODS OF RECITATION PER WEEK.

| STUDIES. | CLASS C. | CLASS B. | CLASS A. | COLL. PREP. |
|-----------------------|----------|----------|------------------|-------------------|
| Mathematics, - - - | 4 | 4 | 3 | 3 |
| Eng. Language, - - - | 4 | 3 | 2 | 1 |
| Reading and Speaking, | 4 | 3 | 2 | 1 |
| Spelling, - - - | 4 | 2 | 2 | 1 |
| Writing, - - - | 4 | 3 | 2 | 2 |
| Drawing, (Free-hand) | 2 | 2 | 2 | 2 |
| History, - - - | 2 | 3 | 3 | 3 |
| Geography, - - - | 4 | 3 | | |
| Natural History, - | 2 | 1 | 2 | 2 |
| French, - - - | | | 3 | 3 |
| Latin, - - - | | 4 | * { 4 or 4 | † { 4 or |
| Etymology, - - - | | | | { 2=1 and 3 |
| Draughting, - - - | | | | |
| German, - - - | | | | |
| Physics, - - - | | | 1 | |
| Chemistry, - - - | | | | 1 |
| Astronomy, - - - | | | | 1 |
| | 30 | 28 | 26 | 24 |

* Students of Class A, who do not take Latin, are required to take four periods of Etymology per week.

† Students of the Coll. Preparatory Class, who do not take Latin, are required to take two periods of Draughting and three periods of German per week.

Students in Preparatory School.

COLLEGE PREPARATORY CLASS.

| | |
|---------------------------------|----------------------------|
| Andrews, Benjamin, | <i>Morristown, N. J.</i> |
| Bartram, Hannah M., | <i>Newtown Square, Pa.</i> |
| Bones, Emma, | <i>New York, N. Y.</i> |
| Carpenter, Estelle, | <i>Rahway, N. J.</i> |
| Collins, William J., | <i>Columbia City, Ind.</i> |
| Dingee, Charles, | <i>Newportville, Pa.</i> |
| Elkins, William L., | <i>Philadelphia, Pa.</i> |
| Eves, Laura E., | <i>Millville, Pa.</i> |
| Gaskill, Helen L., | <i>Birmingham, N. J.</i> |
| Gregg, Ellis, | <i>Unionville, Pa.</i> |
| Haldeman, Sarah L., | <i>Newtown Square, Pa.</i> |
| Haley, John, Jr., | <i>Oakdale, Pa.</i> |
| Hoopes, Elizabeth B., | <i>Wilmington, Del.</i> |
| Hoopes, Sarah A., | <i>West Chester, Pa.</i> |
| Jones, David, | <i>Philadelphia, Pa.</i> |
| Keese, Edmund W., | <i>New York, N. Y.</i> |
| Knight, Allen, | <i>Philadelphia, Pa.</i> |
| Lawrence, Hibberd, | <i>Avondale, Pa.</i> |
| Marshall, Charles, | <i>Milwaukie, Wis.</i> |
| McKnight, Eleanor, | <i>Reading, Pa.</i> |
| Merrick, Ella, | <i>Wrightstown, Pa.</i> |
| Miller, Martha B., | <i>Allegheny City, Pa.</i> |
| Negendank, Egmont T., | <i>Wilmington, Del.</i> |
| Pusey, Florence A., | <i>Wilmington, Del.</i> |
| Pusey, Lillie J., | <i>Wilmington, Del.</i> |
| Richardson, Martha, | <i>Wilmington, Del.</i> |
| Riggs, Grant Scott, | <i>Wilmington, Del.</i> |
| Schoenfeld, Morris, | <i>Philadelphia, Pa.</i> |
| Sharpless, Marian, | <i>Lima, Pa.</i> |
| Shotwell, Mary, | <i>Rahway, N. J.</i> |

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| Smedley, Edgar, | Media, Pa. |
| Starr, Oliver, | Richmond, Ind. |
| Stover, Hugh C., | Erwinna, Pa. |
| Tilton, Josephine H., | New York, N. Y. |

CLASS A.

| | |
|-------------------------|---------------------|
| Beyea, Edwin M., | Dunmore, Pa. |
| Bonner, Ida R., | Byberry, Pa. |
| Brooke, H. Jones, | Media, Pa. |
| Chabot, Charles, | San Antonio, Texas. |
| Chabot, George, | San Antonio, Texas. |
| Chambers, Alexander, | Newtown, Pa. |
| Clothier, Elizabeth J., | Sharon Hill, Pa. |
| Clothier, Mary J., | Sharon Hill, Pa. |
| Cock, Alice H., | Chappaqua, N. Y. |
| Cocks, Elizabeth H., | Old Westbury, L. I. |
| Collins, Mary S., | Moorestown, N. J. |
| Darlington, Anna, | Darlington, Pa. |
| Darlington, Horace, | Darlington, Pa. |
| Duhring, Caspar, | Philadelphia, Pa. |
| Eves, Julia, | Millville, Pa. |
| Garretson, Anna, | Salem, O. |
| Hallowell, Robert M. | Sandy Spring, Md. |
| Honan, Henry, | Oakdale, Pa. |
| Hull, Louise, | West Hoboken, N. J. |
| Jackson, Herbert Louis, | Fort Sully, Da. |
| Ketcham, Harry, | Toledo, O. |
| La Fetra, M. Elizabeth, | Manasquan, N. J. |
| Lafferty, Minna P., | Camden, N. J. |
| Miller, Charles C., | Philadelphia, Pa. |
| Miller, Lydia A. R., | Allegheny City, Pa. |
| Miller, Robert G., | Salem, N. J. |
| Mosher, Frank C., | West Grove, Pa. |
| Pownall, Anne, | Smyrna, Pa. |
| Rogers, Rachel, | Philadelphia, Pa. |
| Sanderson, Henry, | Thurlow, Pa. |
| Shafer, Henry C., | Phoenixville, Pa. |
| Smedley, Elizabeth, | Media, Pa. |
| Stover, Caroline C., | Irwinna, Pa. |
| Sumner, Helen K., | Brooklyn, N. Y. |

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|---------------------------------|--------------------------|
| Thompson, Justice M., | <i>Philadelphia, Pa.</i> |
| Ulman, Ansel, | <i>Williamsport, Pa.</i> |
| Walker, Charles J., | <i>Waterford, Va.</i> |
| Wiggins, Grant, | <i>Richmond, Ind.</i> |
| Wilbur, Mary E., | <i>West Chester, Pa.</i> |
| Wood, Samuel, | <i>Winchester, Va.</i> |

CLASS B.

| | |
|----------------------------------|-------------------------------|
| Allen, Mary, | <i>Germantown, Pa.</i> |
| Baker, Frederick R., | <i>Philadelphia, Pa.</i> |
| Barnsley, George T., | <i>Hartsville, Pa.</i> |
| Bennett, Alice H., | <i>Philadelphia, Pa.</i> |
| Bodder, Benjamin G., | <i>Philadelphia, Pa.</i> |
| Bush, George T., | <i>Bellefonte, Pa.</i> |
| Cary, Mary, | <i>Newtown, Pa.</i> |
| Cary, Robert, | <i>Newtown, Pa.</i> |
| Clark, Mortimer, | <i>Philadelphia, Pa.</i> |
| Clothier, Morris L., | <i>Sharon Hill, Pa.</i> |
| Cope, C. Frederick, | <i>Philadelphia, Pa.</i> |
| Cornwell, Walter J., | <i>Port Washington, N. Y.</i> |
| Diller, Alta M., | <i>New Holland, Pa.</i> |
| Eames, Henry, | <i>New York, N. Y.</i> |
| Fundenberg, Katharine, | <i>Pittsburgh, Pa.</i> |
| Grunsfeld, Helen, | <i>Albuquerque, N. M.</i> |
| Hagerty, Summerfield, | <i>Baltimore, Md.</i> |
| Jones, Ella, | <i>Philadelphia, Pa.</i> |
| Jones, Joseph L., Jr., | <i>Philadelphia, Pa.</i> |
| Jones, Martha, | <i>Conshohocken, Pa.</i> |
| Lawrence, Reginald A., | <i>Brooklyn, N. Y.</i> |
| Levis, Minford, | <i>Philadelphia, Pa.</i> |
| Loeb, Horace, | <i>Philadelphia, Pa.</i> |
| Marshall, William J., | <i>Milwaukie, Wis.</i> |
| Merrill, Frank, | <i>New York, N. Y.</i> |
| Middleton, Edwin, | <i>Philadelphia, Pa.</i> |
| Moore, Ellen Gertrude, | <i>Atlanta, Ga.</i> |
| Morse, Isabella H., | <i>Philadelphia, Pa.</i> |
| Musselman, Gilbert P., | <i>Atlantic City, N. J.</i> |
| Needles, Arthur, | <i>Baltimore, Md.</i> |
| Needles, William J., | <i>Philadelphia, Pa.</i> |
| Nesbitt, William R., | <i>Port Deposit, Md.</i> |

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|-----------------------------------|--------------------------|
| Parrish, Adelaide, | <i>New Egypt, N. J.</i> |
| Paul, William K., | <i>Philadelphia, Pa.</i> |
| Phillips, Josephine, | <i>Philadelphia, Pa.</i> |
| Phillips, Ryland W., | <i>Philadelphia, Pa.</i> |
| Quinn, Granville P. G., | <i>Philadelphia, Pa.</i> |
| Seligman, Eva, | <i>Santa Fe, N. M.</i> |
| Seligman, James, | <i>Santa Fe, N. M.</i> |
| Shotwell, Maggie R., | <i>Rahway, N. J.</i> |
| Smyth, P. Hanson, | <i>Byberry, Pa.</i> |
| Squier, Lucien B., | <i>New York, N. Y.</i> |
| Taylor, Howard G., | <i>Hainesport, N. J.</i> |
| Thompson, George W., | <i>Jeddo, Pa.</i> |
| Woodwell, Marian, | <i>Pittsburg, Pa.</i> |

CLASS C.

| | |
|------------------------------------|-------------------------------|
| Albertson, Elizabeth L., | <i>Norristown, Pa.</i> |
| Allen, Benjamin, | <i>Germantown, Pa.</i> |
| Brooks, Francis M., | <i>Philadelphia, Pa.</i> |
| Brooks, William, | <i>Philadelphia, Pa.</i> |
| Brownfield, Harold, | <i>Philadelphia, Pa.</i> |
| Bush, Henry, | <i>Bellefonte, Pa.</i> |
| Chalfant, Edwin, | <i>Unionville, Pa.</i> |
| Clarendon, Thomas, | <i>New York, N. Y.</i> |
| Cornwell, William D. S., | <i>Port Washington, N. Y.</i> |
| Frohock, Theresa, | <i>Philadelphia, Pa.</i> |
| Hawley, Mary, | <i>Media, Pa.</i> |
| Kennedy, Maxwell, | <i>Philadelphia, Pa.</i> |
| Mahoney, Michael, | <i>Philadelphia, Pa.</i> |
| Morgan, Nathan E., Jr., | <i>Philadelphia, Pa.</i> |
| Moross, Gertrude, | <i>Toledo, O.</i> |
| Naylor, Morris, | <i>Philadelphia, Pa.</i> |
| Neuscheler, Irving, | <i>New York, N. Y.</i> |
| Ogle, Charles W., | <i>Philadelphia, Pa.</i> |
| Pacheco, David, | <i>Parana, Brazil.</i> |
| Sharpless, Alice, | <i>Goshenville, Pa.</i> |
| Squier, Benjamin B., | <i>New York, N. Y.</i> |
| Thudicum, Carl Louis, | <i>Philadelphia, Pa.</i> |
| Tome, George C., | <i>Jersey Shore, Pa.</i> |

SUMMARY.

| | |
|--------------------------------------|-------|
| College Preparatory Class, | 34 |
| Class A. | 40 |
| Class B. | 45 |
| Class C. | 23 |
| | <hr/> |
| Total, | 142 |

SUMMARY BY STATES.

| | |
|------------------------|-------|
| Pennsylvania | 85 |
| New York | 14 |
| New Jersey | 13 |
| Delaware | 6 |
| Maryland | 5 |
| Indiana | 4 |
| New Mexico | 3 |
| Ohio | 3 |
| Texas | 2 |
| Virginia | 2 |
| Wisconsin | 2 |
| Dakota | 1 |
| Georgia | 1 |
| Brazil | 1 |
| | <hr/> |
| Total | 142 |



COMMITTEE

ON

Trusts, Endowments and Scholarships.



SAMUEL WILLETS, 303 Pearl Street, New York City, N. Y.

JOSEPH WHARTON, P. O. Box 2786, Philadelphia, Pa.

DANIEL UNDERHILL, Jericho, L. I.

ISAAC H. CLOTHIER, 801 Market Street, Philadelphia, Pa.

M. FISHER LONGSTRETH, Secretary and Treasurer,

Sharon Hill, Del. Co., Pa.

