SWARTHMORE COLLEGE,

1882-83.

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FOURTEENTH

ANNUAL CATALOGUE

OF

SWARTHMORE COLLEGE,

SWARTHMORE, PA.

1882-83.

WITH MINUTES OF THE

NINETEENTH ANNUAL MEETING

OF THE

STOCKHOLDERS.

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

CALENDAR.

1882-83.

| 1882. | Ninth month, 12th, | Third-day, | Meeting of the Board of Managers. |
|-----------|----------------------|--------------|--|
| " | Ninth month, 26th, | Third-day, | Examinations for admission begin. |
| "" | Ninth month, 27th, | Fourth-day, | Examinations for admission completed, and old students return. |
| 66 | Ninth month, 28th, | Fifth-day, | Regular Exercises begin. |
| " | Twelfth month, 4th. | Second-day, | Meeting of the Board of Managers. |
| 66 | Twelfth month, 5th, | Third-day, | ANNUAL MEETING OF STOCKHOLDERS. |
| " | Twelfth month, 5th, | Third-day, | Meeting of the Board of Managers. |
| 66 | Twelfth month, 22nd, | Sixth-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. |
| ** | Third month, 6th, | Third-day, | Meeting of the Board of Managers. |
| 66 | Fifth month, 5th, | Seventh-day, | Junior Exhibition. |
| 66 | Fifth month, 28th, | Second-day, | Senior Examinations begin. |
| 66 | Sixth month, 4th, | Second-day, | Senior Examinations completed, the results announced, and parts for Commencement assigned. |
| 66 | Sixth month, 19th, | Second-day, | Meeting of the Board of Managers. |
| 66 | Seventh month, 2nd, | Second-day, | Annual Business Meeting of the Alumni Association. |
| 66 | Seventh month, 31d, | Third-day, | Commencement. |
| 66 | Ninth month, 11th, | Third-day, | Meeting of the Board of Managers. |
| 66 | Ninth month, 11th, | Third-day, | Examinations for admission begin. |
| 66 | Ninth month, 13th, | Fifth-day, | Examinations for admission completed, and old students return. |
| 66 | Ninth month, 14th, | Sixth-day, | Regular Exercises begin. |
| 66 | Twelfth month, 3rd, | Second-day, | Meeting of the Board of Managers. |
| ** | Twelfth month, 4th, | Third-day, | ANNUAL MEETING OF STOCKHOLDERS. |
| " | Twelfth month, 4th, | Third-day, | Meeting of the Board of Managers. |
| 66 | Twelfth month, 21st, | Sixth-day, | Holidays begin. |
| 1884. | First month, 2nd, | Fourth-day, | Students return for roll-call at 8 P. M. |
| 60 | First month, 3rd, | Fifth-day, | Regular Exercises begin. |
| | | | |

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CORPORATION.

Øfficers.

CLERKS.

GEORGE W. HANCOCK, ABBY M. WOODNUTT, Fortieth St. and Lancaster Ave., Phila. 1528 Arch Street, Philadelphia.

TREASURER.

ROBERT BIDDLE,

No. 511 Commerce Street, Philadelphia.

BOARD OF MANAGERS.

Term expires Twelfth Month, 1883.

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

SWARTHMORE COLLEGE.

Term expires Twelfth Month, 1884.

JOSEPH WILLETS, ELI M. LAMB, BENJAMIN HALLOWELL, JR., RACHEL T. JACKSON, ANNA M. HUNT, SUSAN W. LIPPINCOTT, SARAH H. MERRITT, HERMAN HOOPES, Trenton, N. J. Friends' School, Lombard St., Balt., Md. Swarthmore, Penna. No. 313 Chelton Ave., Germantown, Pa. No. 1802 Wallace St., Philadelphia. Cinnaminson, N. J. 184 Lefferts Place, Brooklyn, L. I. No. 510 Minor St., Philadelphia.

Term expires Twefth Month, 1885.

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

Term expires Twelfth Month, 1886:

ISAAC STEPHENS, JAMES V. WATSON, CLEMENT BIDDLE, MARTHA G. MCILVAIN, SOPHIA U. WILLETS, SALLIE M. OGDEN, EDMUND WEBSTER, EMMA MCILVAIN, Trenton, N. J. No. 718 Franklin St. Philadelphia. Chaddsford, Pa. Fifty-ninth St. and Elmwood Ave., Phila. Manhasset, L. I. No. 314 Vine St., Philadelphia. 2031 Locust St., Philadelphia. Fifty-ninth St. and Elmwood Ave., Phila.

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Officers and Committees of the Board.

PRESIDENT.

SAMUEL WILLETS.

SECRETARY.

M. FISHER LONGSTRETH.

AUDITORS.

GEORGE W. HANCOCK,

EMMOR ROBERTS.

INSTRUCTION.

CLEMENT BIDDLE, ANNA M. FERRIS, JOSEPH WHARTON, ELI M. LAMB, M. FISHER LONSTRETH, ANNA M. HUNT, EMMOR ROBERTS, HANNAH W. HAYDOCK.

MUSEUM AND LABORATORIES.

JOSEPH WHARTON, M. FISHER LONGSTRETH,

ANNA M. HUNT, MARY T. LONGSTRETH.

FRIENDS' HISTORICAL LIBRARY.

RACHEL T. JACKSON, ANNA M. FÉRRIS, ISAAC STEPHENS, ELI M. LAMB.

FINANCE.

EDWARD H. OGDEN,

JAMES V. WATSON,

JOSEPH WHARTON.

BUILDING AND PROPERTY.

EDWARD H. OGDEN, EMMOR ROBERTS, JAMES V. WATSON, DANIEL UNDERHILL, GEORGE W. HANCOCK, EDMUND WEBSTER.

TRUSTS, ENDOWMENTS AND SCHOLARSHIPS.

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

EXECUTIVE COMMITTEE.

EMMOR ROBERTS, CLEMENT BIDDLE, DANIEL UNDERHILL, JOSEPH WHARTON, EDWARD H. OGDEN, GEORGE W. HANCOCK, EDMUND WEBSTER, HERMAN HOOPES, MARTHA G. MCILVAIN, JANE P. DOWNING, ANNA M. FERRIS, MARY T. LONGSTRETH, ANNA M. HUNT, SALLIE M. OGDEN, SUSAN W. LIPPINCOTT, EMMA MCILVAIN.

Ex-Officio, M. FISHER LONGSTRETH.

11. Faculty of Bovernment.

EDWARD H. MAGILL, President.

ANNA W. FROST CLAPP, Matron.

EUGENE PAULIN, Professor of French.

ARTHUR BEARDSLEY,

Professor of Mechanics and Engineering.

WILLIAM HYDE APPLETON, Professor of Greek and German.

SUSAN J. CUNNINGHAM, Professor of Mathematics.

SAMUEL S. GREEN, Professor of Physics and Chemistry.

MARY L. AUSTIN, Assistant Professor of Latin.

THOMAS S. FOULKE, Superintendent.

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III. Faculty of Austruction.

EDWARD H. MAGILL, A. M., President, and Professor of the Latin Language. 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. MARY L. AUSTIN, Assistant Professor of the Latin Language. ELIZABETH C. MILLER, A. B., Assistant Professor of Rhetoric. WILLIAM PENN HOLCOMB, M. L., Assistant Professor of History. JOSEPH W. TEETS, Assistant Professor of Elocution. ARTHUR COLMAN DAWSON, B. L., Assistant Professor of German and French. ELLEN M. GRISCOM, Instructor in Free-hand Drawing. AMELIA P. BUTLER, Instructor in Theory and Practice of Teaching. OLIVIA RODHAM. Assistant Librarian, and Instructor in Botany.

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SWARTHMORE COLLEGE.

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.

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, B. L., Instructor in French and German.

FRANCES LINTON, A. M., Instructor in English and Latin.

OLIVIA RODHAM, Assistant Librarian and Instructor in English Branches.

J. MOTT SMITH, A. B., Instructor in English Branches.

IV. GENERAL INFORMATION.

Swarthmore College was founded by members of the religious Society of Friends, in order to provide the children of the Society and others with opportunities for higher education under guarded care. With this object in view, a property of 240 acres was secured in a rural district ten miles from Philadelphia, on the Central Division of the P. W. and B. Railroad. It is accessible by trains from the Broad St. station, sixteen times daily. About half the land is used for farming purposes, providing milk and vegetables for the College; the remainder is devoted to lawn and pleasure grounds. Crum Creek, which forms the western boundary of the property, affords facilities for boating, bathing and skating. The portion of the grounds bordering the stream is of great picturesque beauty. The building site is high, thus securing perfect drainage and pure air, and commanding a fine view of the surrounding country for many miles.

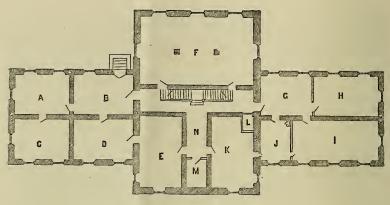
The Principal College Building is a massive stone structure 348 feet long. It consists of a center building four stories high, containing public rooms such as Lecture Rooms, Museum, Library, Reading Room, Parlors, Dining Hall, etc. Fire proof compartments separate this building from the two wings. These latter are each three stories high. The ground floors are devoted to lecture and recitation rooms; the remaining floors in the East Wing contain the dormitories of the young women, and in the West Wing, those of the young men. Though the dormitories are thus widely separated, the sexes mingle freely under proper care in the class rooms, parlors, and dining hall. The instructors reside in the same building with the students, and the relations between them are such, that there is comparative freedom from the dangers and temptations ordinarily incident to college life. The buildings are heated throughout by steam, lighted by gas, and thoroughly ventilated.



The Science Hall was erected and fitted up during the past year. It is constructed of stone, in the most durable manner, and was planned with special reference to the work of our students in science. The center building has a frontage of 44 feet, and a depth of 64 feet; the wings are each 43×33 feet.

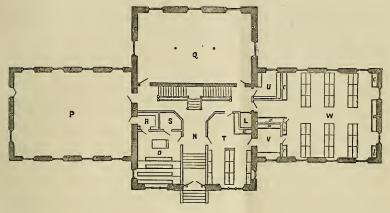
A large amount of fine apparatus has been secured at home and abroad during the past summer, to which continual additions will be made by purchase and by construction in the Mechanical Laboratory.

The following floor plans will explain the arrangement of the several floors, and the uses to which they are applied :----



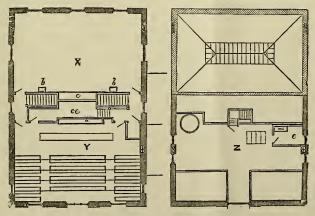
BASEMENT.

- 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. Physical Laboratory for experimentation and research.
- Q. 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. c c Apparatus Room.

Other Buildings are a 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 sectional boilers for heating and cooking purposes. All these buildings are constructed of stone.

The General Library contains upwards of 4000 volumes of works generally selected by the Professors and Instructors at the heads of the various departments of study, and is, in consequence, a valuable working collection.

Friends' Historical Library of Swarthmore, founded by Anson Lapham, 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.

This collection is stored in a fire proof apartment, and it is hoped that Friends and others will deem it a secure place to deposit books and other material in their possession which may be of interest in connection with the history of the Society. Such contributions should be sent to the Librarian, *Arthur Beardsley*, *Swarthmore*, *Pa*.

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.

The Museum occupies the entire fourth floor of the center building. It embraces collections in Geology, Mineralogy, Zoology and Botany. It is a working collection used constantly in the classes. Contributions of material or money for the museum should be sent to the Curator, Dr. Joseph Leidy, Swarthmore, Pa.

Literary Societies are maintained by the students. There are 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.

The Gymnasium, under the care of the Students' Athletic Association, is open at certain hours each day for the exercises of the boys

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and young men; and a large room in the Main Building is set apart for the exercises of the girls and young women. Students are also encouraged to take regular daily exercise in the open air, for which the extensive grounds connected with the College afford ample facilities.

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.

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; nor must they be visited on the First-day of the week.

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.

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.

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

Commencement and Vacations.—The College year begins on the second Third-day of Ninth Month, and closes with Commencementday, which occurs on the third Third-day of Sixth Month. Students are not admitted for a period less 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.

The Institution embraces two distinct departments,

I. THE COLLEGE.

II. THE PREPARATORY SCHOOL.

The latter school receives those pupils who are not sufficiently advanced in their studies to enter the College. The point of advancement requisite for admission to the College will be found explained in Section VI. of this catalogue.

The students of the Preparatory School are under the same general management as the College classes. They receive instruction from teachers employed especially for this purpose, and also from professors and instructors of the College.

V. EXPENSES.

In the College, the cost 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.

In the Preparatory School the charges are as follows:

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 all 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.

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 Institution 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.

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

THERE ARE NO EXTRA CHARGES.

PAYMENTS.

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

For further information concerning the Institution, Courses of Study, &c., address the President,

EDWARD H. MAGILL,

SWARTHMORE,

Penna.

VI. THE COLLEGE.

The studies required for a degree extend over four years. The requirements for admission are intended to be such as Friends' Schools generally can meet. For graduation, the amount will be found to compare favorably with the requirements at other Colleges. It is believed to afford a sufficient preparation in Science and general culture, for the ordinary avocations of life, for the study of any of the learned professions, or for the pursuit of special studies in the higher Universities, at home or abroad. The studies are so arranged that by making a suitable selection, the student can pursue those courses which are most congenial to his tastes, or which will be most serviceable to him in his future career. To facilitate this choice of studies, each class is divided into four sections as follows:

I. 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*.

2. 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*.

There are for the students in this section, special extensions of the courses in the directions of Chemistry and Engineering, so that the student may make his work largely technical. The degree of *Civil Engineer* is given as a second degree to Engineering students three years after graduation. (See page 35.)

3. 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 Letters*.

4. Special Students, and others, pursuing irregular courses. Such students who shall complete all the courses of study in any particular subject, may receive a certificate to that effect upon the recommendation of the Professor in charge of the department specified, but they can receive no degree. The pursuit of the prescribed courses, whether students are candidates for degrees or not, is especially recommended.

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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 their honorable dismission.

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 11th, 12th and 13th of Ninth month, 1883. Candidates must present themselves at the College at three o'clock P. M., on Third-day, the 11th of Ninth month.

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

Candidates for admission to the Freshman Class will be examined in the following subjects :

1. MATHEMATICS—*Arithmetic.*—Fundamental Rules, Fractions, (common and decimal) Denominate Numbers, Percentage and its applications, Proportion.

Algebra.—Through Equations of the second degree of one unknown quantity.

Geometry.—The first four Books of Davies's Legendre's Geometry; or an equivalent amount from another author.

2. ENGLISH.—The candidate will be asked to write a few pages upon some assigned subject, or from dictation. It will be examined with reference to Grammar, Spelling, Paragraphing, Punctuation and the use of Capitals. An examination will also be given in the principles of the Grammar.

3. HISTORY.—A general outline of the History of the United States and of England, with the principal dates; the principal facts and dates in Grecian History. In this connection there will be an examination in Ancient Geography, particularly that of Italy, Greece and Asia Minor.

4. GEOGRAPHY.—The general facts of Physical Geography. Descriptive and Political Geography, especially of the United States and Europe.

In addition to the above, the Candidate will be examined in *one* of the following subjects as he may elect:

5. LATIN.—Harkness's Grammar, Harkness's Reader, Harkness's Composition, first thirty lessons; Caesar's Gallic War, first three Books; Virgil's Aeneid, first four Books.

6. FRENCH.—The Candidate should be familiar with the Grammar, especially with the formation and use of the Verbs. He should be able to read easy French at sight, and to translate simple English sentences into French. For this preparation, which should occupy two years, Magill's Grammar and Reader, and Magill's Prose and Poetry are recommended; or French Classics may be read.

GERMAN.—The preparation in German should occupy two years; the first year being devoted to the Grammar and Reader and to writing Exercises; and the second year to reading German Classics with a review of the Grammar. The Candidate should be able to read easy German at sight, and to translate simple English sentences into correct German.

Candidates who are prepared in both French and German, may offer half the above amount equivalent to one year's study of each.

Candidates for the *Classical Section* must pass the above examination in *Latin*.

Greek is not required for admission, but students who have been prepared in Greek can go on in that language with students in the higher college classes.

Candidates for the *Scientific Section* who have had no opportunity to prepare in Latin, French or German, will not be rejected on account of such deficiency if they are otherwise qualified for admission. An opportunity will be offered to make up the deficiency in French or German after admission.

Preparation in Free-Hand Drawing is recommended for all students of Science.

The attention of Committees and Principals of Schools preparing students for the College, is called to the Course of Study in the Swarthmore Preparatory School, (see this Catalogue) which is deemed a suitable preparation.

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, Philadelphia, Pa.

Friends' Seminary, New York, N. Y.

Friends' High School, Baltimore, Md.

Woodstown Academy, Woodstown, N. J.

Friends' School, Wilmington, Del.*

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.

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

COURSES OF STUDY.

I.-MATHEMATIOS.

1. Olney's Algebra through Quadratic Equations, Davies's Legendre's Geometry, Books V and VI. Chauvenet's Plane Trigonometry. Four times a week. Required of all students in the Freshman Class.

2. Davies's Legendre's Geometry, Books VII-IX, Olney's Higher Algebra. Twice a week. Required of all students in the Sophomore Class.

3. Olney's Differential and Integral Calculus. Twice a week. Elective for all students in the Sophomore Class.

4. Todhunter's Conic Sections. Chauvenet's Spherical Trigonometry. Four times a week. Elective for all students who have completed Courses 1, 2 and 3.

5. Chauvenet's Spherical and Practical Astronomy. Elective for all students who have completed Courses 1, 2, 3 and 4.

II.-NATURAL HISTORY.

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

I. Comparative Anatomy and Physiology.—A course of lectures extending through two years, once a week. Required of all students in the Freshman Class and elective for those in the Sophomore Class.

2. Botany.—Lectures, recitations, and analysis of plants. Twice a week. Required of all students in the Sophomore Class.

3. Mineralogy.—Lectures. Once a week, last half year. Required of all students in the Junior Class.

The determination of minerals with the blowpipe, is elective for students who have completed Course 1 in chemistry.

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 Musuem of the College affords ample material for illustrating the instruction in Natural History.

III.-PHYSICS.

The following are the courses in Physics:

I. A course of recitations on the mechanics of solids and fluids. Twice a week. Elective for all students who are taking, or who have completed Course 3 in Mathematics.

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2. Lectures on Sound, Heat, Light, Electricity and Magnetism; Ganot's Physics. Twice a week. Required of all students in the Sophomore Class.

3. A Course of Laboratory work in Mechanical and Physical Measurements. Twice a week with one period of lectures and recitation; counting as two periods. Elective for students who have completed Course 2.

IV.-CHEMISTRY.

The courses in Chemistry are as follows:

1. Lectures on Inorganic Chemistry and some of the more important of the Carbon compounds. Twice a week. Elective for all who wish to begin the study of Chemistry.

2. Laboratory Practice in general Chemistry. Four Periods counting as two. This course is supplementary to Course 1, and is elective for those who are pursuing that course or who have completed it.

3. Laboratory Practice. Six Periods counting as three, with one of Lectures and Recitations. During the first half-year, Qualitative Chemical Analysis; during the second, either Blowpipe Analysis and Determinative Mineralogy, or Qualitative Chemical Analysis as the student may elect. This course is elective for all who have completed Course 1.

4. During the first part of the year Recitations twice a week, in Cooke's Chemical Philosophy. Followed during the last half year by lectures in Organic Chemistry. Elective for members of the Junior and Senior Classés.

5. Lectures and Recitation in Chemical Technology twice a week. Wagner's Chemical Technology. Elective for members of the Junior and Senior Classes. Courses 4 and 5 are given in alternate years.

6. Quantitative Chemical Analysis. The full course extends over two years with sixteen periods per week, counting as eight. This course, or part of it, is elective for all students who have completed Courses 1 and 3. It includes Gravimetric Analysis, Volumetric Analysis, the analysis of Minerals, Ores, Soils, Fertilizers, Commercial Products, Water Analysis, Organic Analysis, and Assaying.

For the benefit of those who intend to study Medicine or Pharmacy after graduation, this course is modified so as to include the elements of Medical Chemistry.

Students taking Course 6, will find it convenient to have a reading knowledge of German.

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

1. History of Rome, including the Empire. Text book. Leighton's History of Rome. Twice a week. Elective for all students in the Freshman Class.

2. Review of the Modern History of England and France, and the Period of the Reformation in Europe. Essays are required of the students on the great Reformers. Twice a week. Elective for all students in the Sophomore Class.

3. Colonial History and History of the United States the first half year; the last half year the Principles of Constitutional Government and Law, including the principles of government in the State and Nation. Twice a week. Elective for all students in the Senior Class.

4. In addition to the regular class work, there will be a course of lectures delivered each year on different periods of History, to be attended by all the Historical students.

The course for 1883-4, will be on Modern Germany and the Rise of Prussia.

5. The Elements of Political Economy, with the discussion of some of the practical questions of the day, prominent among them being Protection and Free Trade Corporations in the United States, Civil Service Reform, Labor Associations and Trades' Unions, and Socialism. Twice a week. Required of all members of the Junior Class.

VI.-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. This course extends over two years. It is the regular work of the Literary Sections of the Freshman and Sophomore Classes, aud is elective for other students in those classes.

3. A course of critical reading in authors prior to the Nineteenth century, from Chaucer down, four times a week, and extending through two years. This course is required of the Literary Sections of the 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 who elect English, and is optional with others.

VII.-GERMAN.

1. Beginning German. The Grammar, with constant practice in writing exercises; reading German ballads and easy prose; conversational exercises. Four times a week. Elective for students in the Freshman and Sophomore classes who have not previously studied German.

2. Stories—Aus dem Leben eines Taugenichts; German plays— Eigensinn, Einer muss heirathen etc.; exercise in writing German; conversation. Four times a week. Elective for students in the Freshman and Sophomore Classes who have completed Course I or an equivalent.

3. Schiller's Wilhelm Tell, Maria Stuart, etc.; dictation; writing; conversation. Twice a week. Elective for students who have completed Courses 1 and 2 or an equivalent amount.

4. Goethe or Lessing; Schiller's Prose; studies in the history of German Literature; conversation and writing. Twice a week. Elective for students who have completed Courses 1, 2 and 3, or an equivalent amount.

VIII.-FRENCH.

1. Beginning French. Magill's Grammar and Reader; Writing French Exercises. Four times a week. Elective for those who have not previously studied French.

2. Fénelon's Télémaque; Magill's Grammar. Four times a week. Elective for those members of the Freshman Class who have completed Course 1, or an equivalent.

3. Magill's Prose and Poetry; Magill's Grammar. Four times a week. Elective for students in the Freshman and Sophomore Classes who have completed Courses r and 2, or an equivalent amount.

4. Bôcher's College Series of Plays; Dumas's Napoleon, etc.; Magill's Grammar. Twice a week. Elective for students who have completed Courses 1, 2 and 3, or an equivalent amount.

5. Corneill's Cid; Racine's Athalie; Molière's Misanthrope, etc.; Familiar Lectures in French on French Literature; Magill's Grammar. Twice a week. Elective for students in the Senior Class who have completed Courses 1, 2 and 3, or an equivalent amount.

IX.-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-geared), 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.—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. 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

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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:

I. 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.-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 Orthoëpy; and Public Exercises in Reading and Delamation throughout the College Course.

XI.-TEACHING.

1. Beginning Course. Lectures on Principles of Teaching and School Government. Twice a week. Elective for students in any of the classes.

2. Lectures on methods of teaching History, Geography, and Reading. Fitch's Lectures on Teaching, delivered at Cambridge University, England, are read by the class. Twice a week. Elective for all students who have completed Course 1.

3. Lectures on methods of teaching Language and Mathematics. Twice a week. Elective for all students who have completed Course 1. Courses 2 and 3 are given in alternate years.

4. Practice in teaching classes of small children. Four times a week, counting as two periods. Required of all students who are taking Courses 1, 2 or 3.

This course is not elective for other students.

The Teacher's Diploma is given at graduation, in addition to the regular baccalaureate degree, to those students who have included among their elective studies all of the above courses. For the satisfactory completion of one or two of the first three courses, with the corresponding amount of practice, a suitable certificate will be given.

XII.-LATIN.

The following courses are offered in Latin, all of which the student must complete to obtain the degree of A. B. In all the courses there are four recitations per week :

1. Harkness's Grammar and Latin Prose Composition; Virgil's Æneid; Livy. This is the work of the classical section of the Freshman Class. It is elective for properly qualified students of the Scientific and Literary sections of any of the classes.

2. Harkness's Grammar and Latin Prose Composition; Cicero's Orations; Livy. This course is pursued by the classical section of the Sophomore Class, and is elective for students in the Scientific and Literary sections of any of the classes who have completed Course I or an equivalent.

3. Horace's Odes; Cicero's De Claris Oratoribus; De Oratore, De Senectute, and De Amicitia.

4. Horace's Satires and Epistles; Tacitus's Agricola and Germania; Satires of Juvenal; Selections from Lucretius.

Courses 3 and 4 are given in alternate years, and are pursued by the classical sections of the Junior and Senior Classes combined. They are elective for all other students who have completed Courses I and 2, or an equivalent amount.

XIII.-GREEK.

Each year opportunity is offered for beginners in Greek, and students who have previously studied it go on in advanced classes. The courses are all elective. They extend over four years, with four recitations per week, and are 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-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.

SWARTHMORE COLLEGE.

The following is a tabular view of the required and elective studies for each class. Each exercise occupies 45 minutes:

STUDIES OF THE FIRST YEAR.

FRESHMAN CLASS.

| | | | | | | | | | | | | | f Ex. veek. |
|---------------|------|----|-------|-----|-----|---|---|--|---|--|---|----|----------------|
| Mathematics, | , | | • | | | | | | • | | • | | 4 |
| Natural Histo | ory, | | | | | | | | | | | | 2 |
| Rhetoric and | Сс | mp | ositi | on, | | | | | | | | | I |
| Elocution, | | | | | | | | | | | | | I |
| Elective, | | | | | | | | | | | | | I 2 |
| | | | | | - | | | | | | | | |
| | | | | Tot | al, | • | • | | • | | • | 20 | |
| | | | | | | | | | | | | | |

ELECTIVE STUDIES.

| Latin, | • | | • | | • | | • | | | | • | | 4 |
|-------------|--------|------|------|------|-------|------|---|---|--|-----|---|----|----|
| Greek, | | | | | | | | | | | | | 4 |
| Engineering | , incl | ludi | ng I | Drau | ight | ing, | | | | | | | 4 |
| German, | | • | | | | | | | | | | | 4 |
| French, | | | | | | | | | | | | | 4 |
| Teaching, | | | | | | | | | | | | | 4 |
| Chemistry (| Lectu | ires | and | Pra | actio | ce), | | • | | | | | 4 |
| Chemistry (| Lectu | ires | alor | ne), | | •- | | | | • . | | | 2 |
| English, | | | | | | | | • | | | | | 2 |
| History, | | | | | | | | | | | | | 2 |
| Freehand D | rawin | g o | r Pa | inti | ng, | | | | | | | 4= | =2 |

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SWARTHMORE COLLEGE.

STUDIES OF THE SECOND YEAR.

SOPHOMORE CLASS.

| | | | | | | | | | | | í Ex. veek. |
|--------------|----|----|-------|------|-----|------|---|---|---|--|----------------|
| Mathematics, | | | | | • | | | | | | 2 |
| Botany, | | | | | | | | | | | . 2 |
| Physics, | | | | | | | | | | | 2 |
| Rhetoric and | Co | mp | ositi | ion, | | | | | | | I |
| Elocution, | | | | | | | | | | | I |
| Elective, | | | | . • | | | | | | | I 2 |
| | | | | | | | | | | | |
| | | | | | Tot | tal, | • | • | • | | 20 |
| | | | | | | | | | | | |

ELECTIVE STUDIES.

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| Latin, | • | | • | | • | | • | | | | • | | • | | 4 |
|--------------|------|-------|------|------|-------|------|------|------|------|------|----|------|-------|----|-----------|
| Greek, | | | | • | | | | | | | | | | | 4 |
| ~ | | | | | | | | | | | | | | | |
| French, | | | | | | | | | | | | | | | 4 |
| Chemistry (I | Lect | ures | and | l Pr | actio | ce), | | | | | | | | | 4 |
| Engineering | (De | escri | ptiv | e G | eom | ., S | urve | ying | g an | d Sl | юр | Prac | ctice |), | 4 |
| Teaching, | | | | | | • | | | | | | | | | 4 |
| History, | | | | | | | | | | | | | | | 2 |
| English, | | | | | | | | | | | | | | | 2 |
| Mathematics | , | | | | ÷., | | | | | | | | | | 2 |
| Mechanics, | | | | | | | | | | | | | | | 2 |
| Natural Hist | ory, | | | | | | | | | | | | | | 2 |
| Drawing and | | | | | | | | | | | | | | | <u>_2</u> |
| | | | | | | | | | | | | | | | |

STUDIES OF THE THIRD YEAR.

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JUNIOR CLASS.

No. of Ex.

| | | | | | | | | | 1 | per w | eek. |
|------------------------|-------|----------|-----|------|------|---|---|---|---|-------|------|
| Political Economy and | Soci | al Sci | ien | ce, | | • | | | • | | 2 |
| Rhetoric and Compositi | on, | | | | | | | | | | I |
| Elocution, . | | | | | | | | | | | I |
| Elective, . | | | | | | | | | | | 16 |
| | | m | | | | | | | | | |
| | | Tota | 1, | • | | • | | • | • | | 20 |
| | | | | | | | | | | | _ |
| | EI | ECTIV | /E | STUI | DIES | • | | | | - | |
| Latin, | | | • | | | | | | | • | 4 |
| Greek, | | | | | | | | • | | | 4 |
| Mathematics, . | | | | | | | | | | | 4 |
| Teaching (Theory and | Prac | ctice) | | | | | | | | | 4 |
| English, . | | | | | | | | | | | 4 |
| Field and Shop Practic | e an | d Gra | iph | ics, | | | | | | | 4 |
| Mechanics and Enginee | ering | 5, | | | | | | | | | 8 |
| Chemistry (Practice) | | | | | | | | | | 2 t | o 8 |
| Chemistry (Lectures), | | | | | | | | | | • | 2 |
| Physics, | | | | • | | | | | • | | 2 |
| French, . | | | • | | | | | | | | 2 |
| German, | | | | | | | | | | | 2 |
| Freehand Drawing or I | Paint | ting, | | | | | • | | | 4 | ==2: |

STUDIES OF THE FOURTH YEAR.

SENIOR CLASS.

| | | | | | | | | | | | | | reek. |
|-----------|------|-----|-----|------|-----|-----|-----|---|--|--|---|--|-------|
| Mental P | hilo | sop | hy, | | • | | | | | | • | | I |
| Geology, | | | | | | | | | | | | | I |
| Rhetoric | and | Co | mp | osit | on, | | | | | | | | I |
| Elocution | ٦, | | | | | | | | | | | | I |
| Elective, | | | | | • | | | | | | | | 16 |
| | | | | | | | | | | | | | |
| | | | | | | Tot | al, | • | | | | | 20 |

ELECTIVE STUDIES.

| Latin, | | · 4 |
|---------------------------------------|--|--------|
| Greek, | | • 4 |
| English, | | • 4 |
| Field and Shop Practice and Graphics, | | . 8=4 |
| Mechanics and Engineering, . | | . 8 |
| Teaching (Theory and Practice), | | • 4 |
| Chemistry (Practice), . | | 2 to 8 |
| Chemistry (Lectures), | | . 2 |
| Astronomy, | | • 4 |
| French, | | . 2 |
| German, | | . 2 |
| History, | | . 2 |
| Freehand Drawing or Painting, . | | 4=2 |

LIMITATIONS IN THE CHOICE OF ELECTIVES.

1. Candidates for the Degree of *Bachelor of Arts*, must include among their electives, Courses 1, 2, 3 and 4 in Latin, and all the courses in Greek; or they may substitute French and German for any or all of the courses in Greek.

2. Candidates for the Degree of *Bachelor of Letters*, must include among their electives, all the courses in English and History, and all the courses in French and German; or in the Freshman and Sophomore years the courses in Teaching may be substituted for the French or the German.

3. Candidates for the Degree of *Bachelor of Science*, must include among their electives, during the first year, four periods of Science or of Teaching; during the second year six periods; during the third year eight periods; and during the fourth year ten periods.

4. In order to be eligible for the Degree of *Civil Engineer*, (three years after graduation), the Bachelor of Science must have included among his electives, all the courses in Mathematics and Astronomy, and all the courses in Mechanics and Engineering. (See pages 22 and 25-27.)

SECOND DEGREES.

After 1884, all candidates for the Master's Degree will be required to pursue a course of study at Swarthmore or elsewhere, under the direction of the Faculty, and to pass examinations in the same.

Upon application to the Faculty, the course will be assigned, and students may present themselves from time to time for examination in such parts of it as they may have completed. Persons residing at the College, and devoting their whole time to the work, can accomplish a sufficient amount in one year; for non-resident candidates, who are at the same time engaged in other work, the course must occupy not less than two years. At present 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 Letters 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.

STUDENTS.

SENIOR CLASS.

| Names. | Se | ctions. | | Residences. |
|----------------------------|----|---------|---|--------------------|
| Bunting, Charles A., | | Eng. | | Sharon Hill, Pa. |
| Cochran, John L., | | Eng. | | Folly Mills, Va. |
| Conrow, Edgar | | Lit. | | Cinnaminson, N. J. |
| Green, Lydia S., | | Cl. | | Media, Pa. |
| Hanes, Florence N., | | Cl. | | Woodstown, N. J. |
| Jackson, Alice W., | | C1. | | 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., . | | C1. | | London Grove, Pa. |
| Pennock, George L., . | | Eng. | | Philadelphia, Pa. |
| Pyle, Charles S., | | Eng. | | West Grove, 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. |
| | | | | Seniora 10 |

Seniors-18.

JUNIOR CLASS.

| Sections. | Residences. |
|-----------|---|
| . Eng. | . Philadelphia, Pa. |
| . Eng. | . Centreville, Del. |
| . Lit. | . Philadelphia, Pa. |
| . Eng. | . Waynesville, Ohio. |
| . Cl. | . Philadelphia, Pa. |
| . Eng. | . Philadelphia, Pa. |
| . Cl. | . Philadelphia, Pa. |
| . Eng. | . Plainfield, N. J. |
| . Cl. | . Philadelphia, Pa. |
| . Cl. | . Hughesville, Va. |
| . Cl. | . Trenton, N. J. |
| . Eng. | . Minneapolis, Minn. |
| . Cl. | . Jericho, L. I. |
| | Juniors-13. |
| | Eng. Eng. Lit. Eng. Cl. Eng. Cl. Eng. Cl. Cl. Cl. Cl. Cl. |

SOPHOMORE CLASS.

| Names. | Sections. | Residences. |
|--------------------------|-----------|--------------------|
| Baker, Minnie F., | . Cl. | Easton, N. Y. |
| Bowne, William H., Jr., | a | Glen Cove, L. I. |
| Browning, Noah H., . | . Cl. | Chatham, N. Y. |
| Churchman, Philip Q., . | . Cl. | Wilmington, Del. |
| Cochran, Joseph D., | . Cl. | Folly Mills, Va. |
| Dixon, Mary G., | . Irreg. | Easton, Md. |
| Evans, Abbie, | . Irreg. | Cinnaminson, N. J. |
| Fisher, William P., Jr., | . Sc. | Fleming, Pa. |
| Hizar, Emma J., | . Lit. | Wilmington, Del. |
| Malcolm, Sarah J., | . Irreg. | Jericho, L. I. |
| Morgan, Elizabeth, | . Cl. | Phoenixville, Pa. |
| Pratt, Mary D., | . Cl. | Concordville, Pa. |
| Schooley, John C., | . Sc. | Hunting Hill, Md. |
| Whitson, Mary E., | . Cl. | Jamaica, L. I. |
| Willets, Elma E., | . Lit. | New York, N. Y. |
| | | Carbona 15 |

Sophomores-15.

FRESHMAN CLASS.

| FRESHNAN OL | ADD. |
|---------------------------------|-----------------------|
| Names. Sections. | Residences. |
| Andrews, Benjamin, Sc. | . Moorestown, N. J. |
| Bartram, Hannah M., Cl. | . Newtown Square, Pa. |
| Bones, Emma S., Irreg. | . New Brighton S. I. |
| Boyd, Rebekah M., Cl. | . Philadelphia, Pa. |
| Cock, Alice H., Irreg. | . Chappaqua, N. Y. |
| | . Old Westbury, L. I. |
| Collins, William J., Sc. | . Columbia City, Ind. |
| | . Cinnaminson, N. J. |
| | . Moorestown, N. J. |
| | . Philadelphia, Pa. |
| | . Richmond, Va. |
| | . West Chester, Pa. |
| | Springfield, Mass. |
| | San Francisco, Cal. |
| | Riverton, N. J. |
| | Milwaukee, Wis. |
| Merrick, Ella, Cl. | Wrightstown, Pa. |
| , , , , | Philadelphia Pa. |
| , , , , | Allegheny City, Pa. |
| Mutthersbough, Sallie B., Irreg | 1 , |
| Negendank, Egmont T., Cl | , <u> </u> |
| Pidgeon, Charles, Sc. | , |
| Pusey, Florence A., Irreg | v , . |
| Pusey, Lillie J., Irreg | Wilmington, Del. |
| Sharpless, Marian, Cl. | , |
| Smedley Edgar, Sc | , |
| Smedley, Samuel, Jr., Sc | Media, Pa. |
| Spencer, Rowland J., Irreg | Curwensville, Pa. |
| Stover, Hugh C., Cl | Erwinna, Pa. |
| Tilton, Josephine H., Irreg | New York, N. Y. |
| Underhill, Annie, Lit | Glen Head, L. I. |
| Watson, Martha M., Cl | Trenton, N. J. |
| Willcox, Percy C,, Cl | Media, Pa. |
| Williamson, Abby, Cl | · |
| | Old Westbury, L. I. |
| Zorns, Marian W., Irreg | 1 / - |
| | Freshman—36. |
| | |

SUMMARY.

| Seniors | | | | | | ι. | | | | | 18 |
|----------|-----|---|---|---|---|----|---|---|---|---|----|
| Juniors | | | | | | | | | | | 13 |
| Sophomor | es | | | | | | • | | | | 15 |
| Freshmen | | | | | | | | | | | 36 |
| Mat | | | | | | | | | | | 82 |
| 100 | al, | • | • | • | • | • | • | • | • | • | 82 |

SUMMARY BY STATES.

| Pennsylvania | | | | | | | | | | | 34 |
|---------------|--|--|--|--|--|--|--|---|--|----|----|
| | | | | | | | | | | | 15 |
| New Jersey | | | | | | | | | | | 11 |
| Delaware . | | | | | | | | | | | 8 |
| Virginia | | | | | | | | | | | 5 |
| Maryland . | | | | | | | | | | | 4 |
| California | | | | | | | | | | •. | 1 |
| | | | | | | | | | | | 1 |
| Massachusetts | | | | | | | | | | | 1 |
| Ohio | | | | | | | | | | | 1 |
| Wisconsin | | | | | | | | • | | | 1 |
| Total, | | | | | | | | | | | 82 |

GRADUATES.

CLASS OF 1873.

| Sarah H. Acton, A.B. | | | Salem, N. J. |
|---------------------------------|-----|-------|---------------------|
| Helen Magill, A.B (Ph.D. Boston | Uni | iver- | |
| sity, 1877) | | | Johnstown, Pa. |
| Elizabeth C. Miller, A.B. | | | Swarthmore College. |
| Esther T. Moore, A.B. | | | Swarthmore College. |
| * Maria C. (Pierce) Green, A.B. | | | Swarthmore College. |
| Lowndes Taylor, A.B | | | St. Paul, Minn. |

CLASS OF 1874.

| Ellen H. (Evans) Price, A.B | • | Philadelphia, Pa. |
|---------------------------------------|---|------------------------|
| Amy W. (Hall) Hickman, A.B. | • | West Chester, Pa. |
| * Alfred T. Haviland, B.S | | Millbrook, N. Y. |
| Mary (Hibbard) Thatcher, A.B. | | Henry Clay P. O., Del. |
| Herman Hoopes, C.E., 1879 | | Philadelphia, Pa. |
| Ferris W. Price, A.B | | Philadelphia, Pa. |
| Elizabeth S. (Woolston) Collins, A.B. | | Mt. Washington, Md. |

CLASS OF 1875.

| John B. Booth, A.B. | | Chester, Pa. |
|-----------------------------------|----------|-------------------|
| Helen T. Comly, A.B. | | Philadelphia, Pa. |
| Franklin H. Corlies, B.S. | | Philadelphia, Pa. |
| * Herbert G. Dow, A.B | | Brooklyn, N. Y. |
| Lizzie (Hanes) Taylor, A.B. | | Woodstown, N. J. |
| Edith R. (Hooper) Roberts, A.B. | | Titusville, Pa. |
| Barton Hoopes, Jr., B.S. | | Philadelphia, Pa. |
| * Oliver Keese, Jr., B.S. | | Titusuille, Pa. |
| J. Reece Lewis, B.S. | | Media, Pa. |
| Howard W. Lippincott, A.B. | | Philadelphia, Pa. |
| Martha (McIlvain) Eastwick, A.B. | | Philadelphia, Pa. |
| John K. Richards, A.B., (LL.B., H | Harvard, | |
| 1879) | | Ironton, Ohio. |
| William H. Ridgway, C.E., 1879 | | Coatesville, Pa. |
| OLASS O | F 1876. | |
| Frank L. Bassett, B.S., (D.D.S. | Philad. | |
| | | Philadelphia, Pa. |
| Arthur W. Bradley, A.B. | | Philadelphia, Pa. |
| (41 | | - · · |

| Frances Linton, A.M., 1881 | ι. | | | Swarthmore College. |
|----------------------------|---------|--------|----|----------------------------|
| Elizabeth L. (Longstreth) | Boyd, A | .В. | | 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 | | nnema | | , |
| Med. Col., 1879) . | | | | Philadelphia, Pa. |
| Herbert W. Smyth, A.B | | | | |
| Mary Willets, A.M., 1881, | (M.D. V | Vomer | | 220000000, g, a or traingr |
| Med. Col., of Phil., 1881) |) | | | Philadelphia, Pa. |
| William P. Worth, B.S. | | | | Coatesville, Pa. |
| Winnam F. Woltin, D.S. | • | • | • | Obaiestitie, 1 a. |
| . (| CLASS 0 | F 1877 | 7. | |
| Joseph T. Bunting, B. S. (| LL.B. | Univ. | of | |
| | | | | Philadelphia, Pa. |
| Norman B. Corson, A.B. | | | | |
| Eudora Magill, A.B. | | | | |
| Jesse R. Norton, A.B. | | | · | Ironton, O. |
| Carroll R. Williams, A.M. | | | в. | 1, 0,000, 0. |
| Univ. of Penna., 1880) | | | | Philadelphia, Pa. |
| Florence M. Yeatman, A.B | • | | • | |
| Florence M. Teatman, A.D | • • | • | • | London Grove, Pa. |
| (| LASS C | F 1878 | 3. | |
| Caroline E. Burr, A.B. | | | | Germantown, Pa. |
| Maybell P. Davis, A.B. | | | | 37 1 177 76 |
| Howard Dawson, A.M. 188 | 2 . | | | Boston, Mass. |
| Tacy A. Gleim, A.B. | | | | Denver, Col. |
| William J. Hall, B.S. | | | | West Chester, Pa. |
| Mary P. Hallowell, A.M. | | (M.) | D. | |
| Women's Med. Col. of P | | | | Davis Grove, Pa. |
| Charles A. Hawkins, A. B. | • | | | Fawn Grove, Pa. |
| William Penn Holcomb, M. | | | | Swarthmore College. |
| Rebecca S. Hunt, A.M., 1 | | | | Saar innier o' o'orrogo. |
| men's Med. Col. of Phila | | | 0- | Philadelphia, Pa. |
| Anna E. (Jackson) Monag | . , | | • | Kennett Square, Pa. |
| Llewellyn H. Johnson, B.S. | | | • | Orange, N. J. |
| Edward Martin, A.M., 1882 | | | • | Univ. of Penna., Phila. |
| | | | • | T) 77 T T |
| Francis J. Palmer, B.S. | | | • | |
| 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, 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 Hooper, 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, C.E. | , 1882, | | | Jersey City, N. J. | | | | |
| Charles R. Miller, (LL.B., University of | | | | | | | | |
| Penna., 1881,) | | | | Philadelphia, Pa. | | | | |
| Josephine (White) Breckens, | A.B. | | | Gilberton, Pa. | | | | |
| Abby M. Woodnutt, B.L. | | | | Philadelphia, Pa. | | | | |

CLASS OF 1880.

| Anne E. Constable, A.B. | | | | | Philadelphia, Pa. |
|--------------------------|--------|------|-------|---|-----------------------------|
| Florence Hall, A.B. | | | | | West Chester, Pa. |
| Myra T. Hillman, A.B. | | | | | Washington, D. C. |
| Emily L. Hough, A.B. | | | | | Minneapolis, Minn. |
| Edward H. Keiser, 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 S. Preston, A.B. | | | | | Philadelphia, Pa. |
| John Turton, B.S. | | | | | New York, N. Y. |
| Fannie A. Willets, A.B. | | | | | Trenton, N. Y. |
| Henry S. Wood, B.S. | | | | | Philadelphia, Pa. |
| | OT. AS | S OF | 1881. | | |
| M | | | | | $O_1 \dots T_{T_1} D_{T_1}$ |
| Martha Bunting, B.L. | • | • | • | • | Sharon Hill, Pa. |
| Wm. Canby, Jr., B.L. | | | | | Mt. Washington, Md. |

Charles B. Doron, B.L. Elsah, Ill.

SWARTHMORE COLLEGE.

| Mary J. Elliott, B.L. | | Philadelphia, Pa. |
|----------------------------|--|----------------------|
| Emma Kirk, B.L. | | Bryn Mawr, Pa. |
| Gertrude B. Magill, A.B. | | Locust Valley, L. I. |
| Eugene Paulin, Jr., A.B. | | Harvard University, |
| - | | Cambridge, Mass. |
| Martha E. Reinoehl, A.B. | | Lebanon, Pa. |
| Edward C. Rushmore, B.S. | | Cookesburg, N. Y. |
| Henry B. Seaman, B.S. | | Brooklyn, N. Y. |
| Charles E. Sharpless, B.S. | | Media, Pa. |
| Alvin T. Shoemaker, B.L. | | Baltimore, Md. |
| J. Byron Thomas, B.S. | | Cheyney, Pa. |
| Ernest F. Tucker, A.B. | | Harvard University, |
| | | Cambridge, Mass. |
| | | |

CLASS OF 1882.

| Baner, W. Llewellyn, A. | B. | | | New York, N. Y. |
|----------------------------|-----|---|-----|------------------------|
| Blackwell, Edith, A.B. | | | | Sommerville, N. J. |
| Brewster, Charlotte E., B | .L. | | • . | Cinnaminson, N. J. |
| Butler, William, Jr., A. H | 3. | | | West Chester, Pa. |
| Cochran, C. Herbert, A.B | | | | Philadelphia, Pa. |
| Cooper, Bertha, B.L. | | | | Camden, N. J. |
| Foulke, P. Fannie, A.B. | | | | Buckingham, Pa. |
| Gale, Mary E., A.B. | | | | Laconia, N. H. |
| Green, Sarah S., A.B. | | | | Moorestown, N. J. |
| Hallowell, Margaret E., A | .В. | | | Swarthmore, Pa. |
| Hart, Elizabeth E., B.L. | | | | Doylestown, Pa. |
| Haslam, Elizabeth, B.L. | | • | | Atglen, Pa. |
| Ogden, Elizabeth M., B.L | ı. | | | West Chester, Pa. |
| Palmer, Charles, A.B. | | | | Concordville, Pa. |
| Phillips, George C., B.S. | | | | Philadelphia, Pa. |
| Rossiter, Horace L., A.B. | | | | Springhouse, Pa. |
| Turton, Charles B., B.S. | | | | New York, N. Y. |
| Weaver, Gerrit H., A. B. | | | | Harvard University, |
| | | | | Cambridge, Mass. |
| Wilson, Emily E., A.B. | | | | London Grove, Pa. |
| Zavits, Edgar M., A.B. | | | | Coldstream, Ont., Can. |
| | | | | |

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.

44

Officers of the Alumni Association.

INCORPORATED 1882.

PRESIDENT,

JOHN B. BOOTH,

Chester, Pa.

VICE-PRESIDENTS,

HELEN T. COMLY, S. CRAIG McCOMB, EDWARD MARTIN, No. 110 N. 15th St., Philadelphia. Jersey City, N. J. No. 1522 Arch St., Philadelphia.

SECRETARY,

CAROLINE E. BURR,

E. Johnson St., Germantown, Pa.

TREASURER,

WILLIAM J. HALL,

RECORDER,

HERMAN HOOPES,

No. 510 Minor St., Philadelphia.

West Chester, Pa.

DIRECTORS,

ABBY M. WOODNUTT, ELLEN S. PRESTON, HERMAN HOOPES, JOSEPH T. BUNTING, CHARLES R. MILLER, J. REECE LEWIS, No. 1528 Arch St., Philadelphia. No. 3205 Baring St., Philadelphia. No. 510 Minor St., Philadelphia. No. 323 Walnut St., Philadelphia. No. 40 S. 3rd St., Philadelphia. Media, Pa.

(45)

VII. PREPARATORY SCHOOL.

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

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.

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.

In arranging the course of study, we have 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 this school, corresponding with the next higher in their own, without re-examination, on presenting certificates to that effect from the Principals of their respective schools.

CONDITIONS OF ADMISSION.

Applicants for admisson 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 11th, 12th, and 13th of Ninth month, 1883. Candidates must present themselves at three o'clock P. M. on Third-day, the 11th of Ninth month. A written statement in regard to scholarship from the pupil's last teacher will receive due consideration.

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.

COURSE OF STUDY.

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 Principle's 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 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 Paulins'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, Books I and II.

Or English Etymology.

Writing.—The Spencerian System.

Drawing.—Croasdale's Geometrical Drawing Books; outline and crayon shading from the solid.

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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, with a text-book for reading and reference.

- 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.

SWARTHMORE COLLEGE.

PERIODS OF RECITATION PER WEEK.

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 classroom, the number of exercises is greater, and diminishes as the pupils become older and better able to prepare their work out of class.

| STUDIES. | CLASS C. | CLASS B. | CLASS A. | COLL. PREP. |
|-----------------------|----------|----------|-----------|---------------------|
| Mathematics, | 4 | 4 | 3 | 3 |
| Eng. Language, | ·4 | 3 | 2 | I |
| Reading and Speaking, | 4 | 3 | 2 | I |
| Spelling, | 4 | 2 | 2 | I |
| Writing, | 4 | 3 | 2 | 2 |
| Drawing, (Free-hand) | 2 | 2 | 2 | 2 |
| History, | 2 | 3 | 3 | 3 |
| Geography, | 4 . | 3 | | |
| Natural History, - | 2 | I | 2 | 2 |
| French, | | | 3 | 3 |
| Latin, | | 4 | *{4 or | †∫ 4 |
| Etymology, | | | 4 | or |
| Draughting, | | | | $\int 2=\mathbf{I}$ |
| German, | | | | ({ and 3 |
| Physics, | | | I | |
| Chemistry, | | | | I |
| Astronomy, | | | | I |
| | 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.

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Students in Prepayatory School.

COLLEGE PREPARATORY CLASS.

Residences.

Names.

Ghent, N. Y. Angell, Elizabeth H. Accotink, Va. Ballinger, D. Walton, Beeson, Louise, Uniontown, Pa. . Betts, Mahlon, Wilmington, Del. Bowers, Olive, Fallsington, Pa. . Brewster, Rachel W., Rahway, N. J. Brown, Walter A., Washington, D. C. Chabot, Charles J., San Antonio, Tex. Chambers, Alexander, Titusville, Pa. . Clothier, Mary J., . Sharon Hill, Pa. Cole, Emma A., New York, N. Y. Collins, Katherine R., Moorestown, N. J. Darlington, Anna S., Darlington, Pa. Darlington, Horace, Darlington, Pa. Dayton, James E., Canandaigua, N. Y. Council Bluffs, Iowa. Dodge, Carrie L., . Duhring, Casper H., Philadelphia, Pa. Eves, Julia E., Millville, Pa. Forman, Emma I., New York, N. Y. Gaskill, Naomi, Swarthmore, Pa. Gawthrop, Charles G., Kennett Square, Pa. Goodwin, Henry B., Jacobstown, N. J. Hallowell, Robert M., Sandy Spring, Md. . Honan, Henry W., Oakdale, Pa. Jackson, Louis H., Fort Sully, Dak. Ketcham, Henry Adams, Toledo, Ohio. Kohn, Miriam, . Savannah, Ga. La Fetra, M. Elizabeth, . Manasquan, N. J.

(51)

| Lane, Frederick K., | | | Atlantic City, N. J. |
|--------------------------|-----|---|-----------------------------------|
| Levis, Minford, | | | Philadelphia, Pa. |
| Marin, Luis, | | | Leon, Nicaragua. |
| McCullough, Minnie B., . | | | Pittsburg, Pa. |
| Miller, Lydia A. R., | | | Allegheny City, Pa. |
| Monroe, Milton S | | | Los Angelos, Cal. |
| Moore, George H., . | | | Sandy Spring, Md. |
| Mosher, Frank C., . | | | West Grove, Pa. |
| Pooke, Harriet Evelyn, . | • | | Navy Yard, Washing- ton, D. C. |
| Reece, Sarah E., | | | Greenwood, Pa. |
| Roberts, Albert J., . | | | Hartford, N. J. |
| Roberts, Horace | | | Fellowship, N. J. |
| | | | Cooksburg, N. Y. |
| | | | Thurlow, Pa. |
| | | | Unionville, Pa. |
| Sholl, A. Lincoln, | | | Burlington, N. J. |
| AL | | | Media, Pa. |
| Stover, Carrie C., | | | Erwinna, Pa. |
| Thompson, Justice M., . | | | Philadelphia, Pa. |
| Thurston, Moses W., | | | Verona, N. J. |
| Ulman, Ansel A., . | | | Williamsport, Pa. |
| vande Sande, William H., | | | Lebanon, Pa. |
| Watson, Miriam, | | | Doylestown, Pa. |
| Wescott, Elizabeth B., . | · · | • | Jersey City, N. J. |
| | | | Richmond, Ind. |
| Wilbur, Mary E., | | | Middle Falls, N. Y. |
| Wood, Samuel B., | | | Winchester, Va. |
| Woodworth, Harry S., . | • | | Rochester, N. Y. |

OLASS A.

| Allen, Mamie, . | | | | Germantown, Pa. |
|----------------------|---|---|---|------------------------|
| Arrison, J. Maurice, | | | | Philadelphia, Pa. |
| Baker, Frederic R, . | | | | Philadelphia, Pa. |
| Barnsley, George T., | | | | Huntingdon Valley, Pa. |
| Birkey, John W., . | | | | Newportville, Pa. |
| Bodder, Benjamin G., | | | | Philadelphia, Pa. |
| Brastow, Frank A., | 9 | | | Wilkesbarre, Pa. |
| Brown, Samuel, . | • | ٥ | ۰ | New York, N. Y. |

| Bush, George T., | | • | • | | Bellefonte, Pa. |
|-------------------------|-----|---|---|---|-----------------------|
| Chabot, George A., | | | | | San Antonio, Tex. |
| Clark, Mortimer, . | | | | • | Philadelphia, Pa. |
| Clothier, Elizabeth J., | | | | | Sharon Hill, Pa. |
| Cope, C. Frederick, | | | | | Philadelphia, Pa. |
| Cornwell, Walter J., | | | | | Port Washington, N.Y. |
| Davis, Emily Y., . | | | | • | Mingo, Pa. |
| Dudley, William L., | | | | | Washington, D. C. |
| Errington, F. Alfred, | | | | • | Staten Island, N. Y. |
| Ervien, Robert P., | | | | | Shoemakertown, Pa. |
| Eyre, William P., . | | | a | • | Philadelphia, Pa. |
| Fawcett, Addison T. | | | | | Zanesfield, Ohio. |
| Fullerton, Joyeuse L., | | | | • | Philadelphia, Pa. |
| Fundenberg, Katherine | C., | | | | Pittsburg, Pa. |
| Greenley, Thomas W., | | | | | Easton, Md. |
| Hagerty, Summerfield, | | | | | Baltimore, Md. |
| Hinkle, S. Cameron, | | | | | Atlantic City, N. J. |
| Jones, Martha P., . | | | | 0 | Conshohocken, Pa. |
| Jones, Joseph L., Jr., | | | | | Philadelphia, Pa. |
| Kemp, William H., | | | | | Easton, Md. |
| Lawrence, Reginald A., | | | | | New York City, N. Y. |
| La Motte, Henry, . | | | | | David's Island, New |
| | | | | | York Harbor. |
| Livezey, John B., . | | | | | Doylestown, Pa. |
| Marshall, Ellis, | | | | | London Grove, Pa. |
| Marshall, William S., | | | | | Milwaukee, Wis. |
| Mathews, Eleanor D., | | | | | Plainfield, N. J. |
| McKechnie, Frederick A | , | | | | Canandaigua, N. Y. |
| McLean, Mary . | | | | | Vineland, N. J. |
| Merrill, Frank S., . | | | | | New York City, N. Y. |
| Middleton, Edwin, Jr., | | | | | Philadelphia, Pa. |
| Moore, Ellen Gertrude, | | | | | Atlanta, Ga. |
| Musselman, Gilbert P., | | | | | New York City, N. Y. |
| Needles, Arthur C., | | | | | Baltimore, Md. |
| Needles, William J., | | | | | Philadelphia, Pa. |
| Newhouse, Oscar B., | | | | | New York, N. Y. |
| Norris, William G., | | | | | Chicago, Ill. |
| Patterson, Mary Helen, | | | | | Sterling, Ill. |
| Paul, William R., . | | | | | Philadelphia, Pa. |
| | | | | | 1 ' |

| Phillips, Josephine, | | | Philadelphia, Pa. |
|-------------------------|----|-----|------------------------|
| Phillips, Ryland W., | | | Philadelphia, Pa. |
| Powell, Louisa, . | | | Hancock's Bridge, N.J. |
| Satterfield, Lawrence, | | | Greensboro, Md. |
| Seligman, Eva M., . | | | Sante Fe, N. M. |
| Seligman, James L., | | | Sante Fe, N. M. |
| Sellers, Alice P., | | | Ridley Park, Pa. |
| Shoemaker, Caroline F., | | | Johnsville, Bucks Co., |
| | | | Pa. |
| Smyth, P. Hanson, | | | Byberry, Pa. |
| Squier, Lucien B., Jr., | | | New York, N. Y. |
| Swezey, Ferris H., . | | | Brooklyn. N. Y. |
| Taylor, Howard G., | | | Hainesport, N. J. |
| Thompson, George W., | | | Hazleton, Pa. |
| Vanstone, Frederick C., | | | Toledo, Ohio. |
| Willard, Thomas Russe | I, | · . | Columbia, Va. |
| Wolf, Florence, . | | | Philadelphia, Pa. |
| Worth, S. Harry, . | | | Wawa, Pa. |
| | | | |

CLASS B.

| Albertson, Elizabeth L., | | Norristown, Pa. |
|--------------------------|--|------------------------|
| Allen, Benjamin, | | Germantown, Pa. |
| Baker, Robert B., | | Philadelphia, Pa. |
| Brooks, Francis M., | | Philadelphia, Pa. |
| Brooks, William H., | | Philadelphia, Pa. |
| Brownfield, Harold E., . | | Philadelphia, Pa. |
| Chalfant, Edwin J., | | Unionville, Pa. |
| Clapham, George G., | | Roslyn, L. I., N. Y. |
| Clapham, Thomas E., | | Roslyn, L. I., N. Y. |
| Clothier, Morris L., | | Sharon Hill, Pa. |
| Cornwell, William S., . | | Port Washington, N.Y. |
| Cummins, Alexander G., | | Smyrna, Del. |
| Dixon, Laura Lee, | | Easton, Md. |
| Dolphin, Sarah B., | | Oakdale, Pa. |
| Eagle, William S., . | | Cecil, Ohio. |
| Evans, William H., . | | Colorado Springs, Col. |
| Griffen, Daniel M., . | | Port Chester, N. Y. |
| Griffin, William, | | Sante Fe, N. M. |
| Grubb, Mary, | | West Chester, Pa. |

| Hatcher, Francis, . | | | Malcom, Iowa. |
|-------------------------|--|--|-----------------------|
| Hawley, Mary M., . | | | Media, Pa. |
| Hibler, Montgomery, | | | New York, N. Y. |
| Kennedy, Maxwell K., | | | Philadelphia, Pa. |
| Kreamer, Henry M., | | | Phoenixville, Pa. |
| La Fetra, Joseph, . | | | Manasquan, N. J. |
| Mahoney, Michael P., | | | Oxford, N. J. |
| McDowell, Egbert G., | | | New York, N. Y. |
| Moore, Carrie W., | | | Quaker Street, N. Y. |
| Nicholas, J. Ivins, . | | | Roxborough, Philadel- |
| | | | phia, Pa. |
| Pacheco, David, . | | | Parana, Brazil. |
| Porter, Charles, . | | | Philadelphia, Pa. |
| Quinn, Granville P. G., | | | Philadelphia, Pa. |
| Scott, Walter, | | | Richboro, Pa. |
| Sharpless, Alice, | | | Goshenville, Pa. |
| Swezey, Cecil A., . | | | Brooklyn, N. Y. |
| Thudichum, Carl Louis, | | | Philadelphia, Pa. |
| Williams, Arthur, . | | | Buckingham, Pa. |
| Worthington, Isabel L., | | | Buckingham, Pa. |
| | | | |

OLASS C.

| Alston, J. Cowgill, . | | | Middletown, Del. |
|-----------------------|--|--|-------------------|
| Bowne, William N., | | | Philadelphia, Pa. |
| Brinton, J. Howard, | | | Gap, Pa. |
| Brooke, Hunter, Jr., | | | Media, Pa. |
| Brosius, William E., | | | Lewistown, Pa. |
| Bush, Henry, | | | Bellefonte, Pa. |
| Deacon, Louis, . | | | Philadelphia, Pa. |
| Ealo, Richard L., . | | | Havana, Cuba. |
| Fridenberg, Mone S., | | | Philadelphia, Pa. |
| Griffin, Eugene, . | | | Sante Fe, N. M. |
| Hague, Victoria, . | | | Woodsburg, N. Y. |
| Hathaway, Stephen J., | | | Sante Fe, N. M. |
| Heaton, William, . | | | Philadelphia, Pa. |
| Hecht, Joseph L., . | | | Philadelphia, Pa. |
| Jones, Preston B., . | | | Edgmont, Pa. |
| Long, Hamilton D., | | | Tacony, Pa. |
| Long, Minnie, . | | | Tacony, Pa. |

| McCrea, Charles, . | | | | | Renovo, Pa. |
|------------------------|---|-----|---|-----|-----------------------------|
| Miller, Elizabeth H., | | | | | Oakdale, Pa. |
| Morgan, Nathan E., Jr. | , | | | | Philadelphia, Pa. |
| Nafarrate, Pedro, . | • | • | · | • | Mapimi, Durango, Mexico. |
| Oliver, T. Ellis, . | | | | | Philadelphia, Pa. |
| Pyle, Gertrude C., . | | . * | | | Wilmington, Del. |
| Quinlan, William C., | | | | | New York, N. Y. |
| Ritch, Watson, . | | | | | Sante Fe, N. M. |
| Sellers, Richard, . | | | | | Media, Pa. |
| Sill, Joseph T., . | | | | | Philadelphia, Pa. |
| Sill, William L., . | | | | | Philadelphia, Pa. |
| Squier, Benjamin B., | | | | | New York, N. Y. |
| Stone, Carrie N., . | | | | | McKeesport, Pa. |
| Tilghman, Edward B., | | | | | Wilmington, Del. |
| Walker, Rebecca M., | | | | | Swedeland, Pa. |
| Williamson, James O., | | | | | Renovo, Pa. |
| Williamson, Olive H., | | | | | Renovo, Pa. |
| Young, Ella, | • | • | | • = | Marlborough, N. Y. |

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SUMMARY.

| Colleg | e Pi | ep | ara | ato | ry | C | las | s, | | | | | | | | 56 | è |
|--------|------|-----|-----|-----|----|---|-----|----|--|--|--|--|--|--|---|-----|---|
| Class | | | | | | | | | | | | | | | | | • |
| Class | | | | | | | | | | | | | | | | | > |
| Class | C. | | | | | | | | | | | | | | | 35 | , |
| | Tot | al, | | | | | | | | | | | | | • | 192 | - |

SUMMARY BY STATES.

| Pennsylvania | a | | | | | | | | | | | | 99 |
|---------------|---|---|---|---|-----|---|---|---|---|---|---|---|-----|
| | | | | | | | | | | | | | 30 |
| New Jersey | | | | | | | | | | | | | 17 |
| 35 3 3 | | | | | | | | | | | | | 8 |
| New Mexico | | | | | | | | | | | | | 6 |
| | | | | | | | | | | | | | 5 |
| Ohio . | | | | | | | | | | | | | 4 |
| District of C | | | | | | | | | | | | | 3 |
| Virginia | | | | | | | | | | | | | 3 |
| Georgia, | | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | 2 |
| Iowa, . | | | | | | | | | | | | | 2 |
| Texas, . | | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | 1 |
| Colorado, | | | | | | | | | | | | | 1 |
| Cuba, . | | | | | | | | | | | | | 1 |
| Dakota, | | | | | | | | | | | | | 1 |
| Indiana . | | | | | | | | | | | | • | 1 |
| Mexico, | | | | | | | | | | | | | 1 |
| Nicaragua, | | | | | | | | | | | | | 1 |
| Wisconsin | | | | | • , | | | | | | | | 1 |
| m , 1 | | | | | | | | | | | | | |
| Total, | | • | • | • | | • | • | • | • | • | • | • | 192 |
| | | | | | | | | | | | | | |

The following degrees were conferred at the Annual Commencement in 1882:

BACHELOR OF ARTS.

W. Llewellyn Baner,Edith B. Blackwell,William Butler, Jr.,C. Herbert Cochran,

P. FRANCES FOULKE,

MARY E. GALE,

SARAH S. GREEN, MARGARET E. HALLOWELL, CHARLES PALMER, HORACE L. ROSSITER, GERRIT E. H. WEAVER, EMILY E. WILSON,

Edgar M. Zavitz.

BACHELOR OF SCIENCE.

GEORGE C. PHILLIPS,

CHARLES B. TURTON.

BACHELOR OF LITERATURE.

Charlotte E. Brewster, Bertha Cooper,

ELIZABETH M. OGDEN,

ELIZABETH E. HART, ELIZABETH HASLAM, ARTHUR COLEMAN DAWSON, (of the Class of 1880.)

MASTER OF ARTS.

| CARROLL R. WILLIAMS, | • | | • | | • | • | | • | (Class of 1877.) |
|----------------------|---|---|---|---|---|---|---|---|------------------|
| Howard Dawson, | | • | | • | | | • | | (Class of 1878.) |
| Edward Martin, . | • | | • | | • | • | | • | (Class of 1878.) |

CIVIL ENGINEER.

SAMUEL CRAIG MCCOMB,

(58)

(Class of 1879.)

MINUTES

OF THE

NINETEENTH ANNUAL MEETING

OF THE

STOCKHOLDERS

OF

SWARTHMORE COLLEGE,

HELD

TWELFTH MONTH FIFTH,

1882.

MINUTES.

At the Nineteenth Annual Meeting of the Stockholders of Swarthmore College, held at Race Street Meeting-House, Philadelphia, 12th month 5th, 1882, due public notice having been given, in accordance with the provisions of the Charter :

The Minutes of the last Annual Meeting were read and approved.

The Treasurer submitted the following Report, which was read, approved, and directed to be entered on the minutes, and published in the Annual Catalogue.

TREASURER'S REPORT.

ROBERT BIDDLE, Treasurer, in Account with SWARTHMORE COLLEGE.

| 1882. | | | | | DR. | | |
|--------------|-----|-------------------|---------|------|--------------------|---|-------------|
| 9th mo. 1st. | To | Amount | receive | d on | Tuition Account, | | \$71.822 45 |
| | " | "" | "" | for | Board, | | 4,806 00 |
| | " | | " | ** | Stationery, . | | 449 32 |
| | ** | " | " " | " | Farm Products, . | | 1,901 36 |
| | " | "" | " | | | | 612 50 |
| | " | 66 | " | "" | Rents, | | 76 00 |
| | " | ** | " | | Interest, . | | 3,069 33 |
| | Bal | lanc e due | Treasu | rer, | 9th mo. 1st, 1882, | • | 17,390 07 |

\$100,127 03

| 1881. | | | CR. | | | | | - |
|--------------|--------------------|------|-------|--------|------|---|-----|-----------------------------|
| | By Balance, . | | | | | | | \$ 1,328 23 |
| 1882. | Dy Dulunce, . | • | • | • | • | • | • • | » -, <u>j</u> =0 - <u>j</u> |
| 9th mo. 1st. | " Salaries, . | | | | | | | 25,796 50 |
| y | " Wages, . | | | | | | | 6,165 75 |
| | " Incidentals, | | | | | | | 3,236 70 |
| | " House Rent, . | | • | | | | | 4,666 51 |
| | (1 D · | | | | | | | 11,208 67 |
| | " Provisions, . | · . | | • | | | | 14,711 49 |
| | " Fuel, . | | | | | | | 3,377 53 |
| | " Light, | · . | | | | | | 2,371 07 |
| | " Farm, . | | | | | | | 2,262 74 |
| | " Advertising and | Stam | DS. | | | | | 2,047 78 |
| | " Books, . | | | | | | | 4,556 20 |
| | " Butter, | | | | | | | 3,157 90 |
| | " Meat, . | | | | | | | 7,016 52 |
| | Isaac S. Cassin, | | | | | | | 3,000 00 |
| | Magistrate's Fees, | | | | | | | 2 00 |
| | Returned Tuition, | | | | | | | 271 44 |
| | Appropriation from | Ende | owmen | t Fund | l, . | | | 3,200 00 |
| | Interest, | | | | | | | 1,750 00 |
| | | | | | | | | |

Philadelphia, 9th mo. 1st, 1882.

\$100,127 03

Having examined the vouchers of ROBERT BIDDLE, Treasurer, we find them correct, showing a balance due him of \$17,390 07.

Philadelphia, 9th mo. 11th, 1882.

M. FISHER LONGSTRETH, Auditors. GEORGE W. HANCOCK,

The Committee on Trusts, Endowments and Scholarships, reported that the investments remained the same as reported last year.

The terms of the following officers expired at this time :

CLERKS.

George W. Hancock,

Matilda Garrigues.

TREASURER.

Robert Biddle.

MANAGERS.

| Isaac Stephens, | Martha G. McIlvain, |
|--------------------|---------------------|
| James V. Watson, | Sophia U. Willets, |
| Clement Biddle, | Eliza H. Bell, |
| Isaac H. Clothier, | Sallie M. Ogden. |

To nominate officers to fill the above vacancies, the following were appointed :

Isaac H. Clothier, Richard H. Downing, Charles M. Biddle, Daniel Foulke, Dillwyn Parrish, Jane P. Downing, Daniel Underhill, Matilda E. Janney, Annie Cooper, John T. Willets, Isaac H. Cock, Eli M. Lamb, J. Hadassah Moore, Mary W. Cock, Sarah H. Merritt and Anna M. Ferris.

The following report of the Board of Managers was read, approved, and referred to the incoming Board for publication :

MANAGERS' REPORT.

At the time of making our report to the stockholders one year ago, the College, after the total destruction of its main building by fire, was pursuing the work of instruction in temporary accommodations in the neighboring town of Media. This work continued until the close of the College year, in 6th month last, and considering the great disadvantages under which we labored, it was, in an unexpected degree, satisfactory. In most of the departments the work proceeded as before, and far less loss was experienced in this respect than we had reason to anticipate. In consequence of the expiration of the lease of the buildings at Media, it was necessary to close the College two weeks earlier than the regular time, a course which was kindly accepted and approved by our patrons as one of the necessities of the situation. The whole number of students during the year, which closed in 6th month last, was only 226, as our accommodations in Media would not permit us to admit more than that number.

Of these, 84 were in the College classes, but adding those of the College Preparatory Class, just introduced between the College and Preparatory School, (thus cutting off most of the Freshman Class for the year) the number was 118. Since our return to the restored College the present year, the number admitted to date is 263, and counting as above, the number in the College and the College Preparatory Class is 132. About one-half of these upper classes are children of members of our Religious Society, and the sexes are about equally divided. In the classes of the Preparatory School about one-fourth are girls, and one-fourth members of our Religious Society.

For the present year the sexes are divided as follows: 168 boys and 95 girls. The average age of the new students is one year greater than heretofore.

Reference was made in last year's Report to the introduction of a new element in the principle of admission to our College classes in the following words: "Students from Friends' Central School in Philadelphia, from Friends' Seminary in New York, and from Friends' Elementary and High School in Baltimore will be admitted to the Freshman Class without examination, upon presenting certificates of qualification from the respective Principals of these schools. Other schools may be added to this list by vote of the Faculty, and the approval of the Committee on Instruction."

Since that time the Friends' Schools at Woodstown, New Jersey, Wilmington, Del., and West Chester, Pa., have, upon application, been added to the above list. It is believed that a judicious extension of this privilege to approved Friends' Schools will be of mutual advantage to them and to the College.

Although our library, so important as a means of instruction, was almost entirely destroyed, yet, by generous contributions of the Alumni and other interested friends, a fair beginning with about 3000 volumes has been made towards its restoration. Several thousand dollars more are, however, needed to place us in this respect, where we were before the fire. The books which are being thus supplied, are selected with care and purchased at the most reasonable rates by a Committee of the Board, to whom this very important service is entrusted.

Friends' Historical Library, which was not destroyed, has been but slightly increased since our last report.

The different departments of instruction remain under the same general management as at the time of the last report, except that Prof. William H. Appleton has now returned from his year's absence abroad and resumed his work, and Prof. Maris has resigned the Professorship of the Theory and Practice of Teaching, to accept a position in Friends' School at Race Street, Philadelphia. The duties of this latter department, which is in a flourishing condition, continue to be acceptably performed by Amelia P. Butler.

Our new Scientific Building, referred to in the last report, is now completed, and was opened to students at the beginning of the present College year, a large number of whom are availing themselves of the great advantages thus afforded in the Departments of Chemistry, Physics and Civil and Mechanical Engineering. It is believed that the College, in this respect, will now compare favorably with other colleges in this country, being equalled by few and surpassed by none, except some special schools of science. A few thousand dollars to complete the equipment in this department could be very profitably employed.

At this time when the discussion of the subject of co-education has been so generally renewed, the Managers think it right to say that their confidence in the system remains not only unshaken, but is greatly strengthened by our experience of thirteen years. We see no reason for separation in the class rooms, deeming *that* instruction unsuitable for *either* sex, which is not suitable to be given *together*. And the general social influence, when both mingle under proper restrictions, with wise and judicious care, in the same College home, we have found to be highly faborable to both.

In this department of the household we have met with a serious loss in the resignation of the Matron, Caroline S. Wood, who has served the College ably and faithfully in this position during the past four years. Her place has been filled by the appointment of Anna W. Frost Clapp, of New York, who has entered upon her duties during the past month.

The price of tuition was changed the present year, making it \$300 a year in Class C, \$350 in the other classes of the Preparatory School, and \$450 in the College Classes, with a reduction of \$100 a year in all of these classes to children of members of our Religious Society. While the work of instruction has been progressing steadily, and the College, in this respect, was never in a more promising and healthful condition, the subject of paramount interest and importance to the stockholders and friends of the College at this time must necessarily be, the restoration of the College buildings which has been accomplished since the last report. A large Committee of the Board of Managers was entrusted with this important service, with power to proceed as rapidly as possible with completeness and thoroughness, towards its early accomplishment. Suggestions were solicited from various sources, especially from those who had been actively engaged in the work of the College. These suggestions were carefully compared and collated, and where they commended themselves to the judgment of the Committee, adopted. The result is seen before us to-day in a building admirably adapted to the various educational purposes for which it was intended. The object in view in the construction of every part has been fitness for the end for which it was designed, together with durability as well as security from fire.

The drainage, the ventilation, the heat, the light, and the water supply have been made the best and most complete that modern science can supply. While economy has been carefully studied, it has

not been forgotten that the wise expenditure of large sums in permanent improvements is far more judicious than frittering away our resources by temporary contrivances, which may save hundreds of dollars this year, and entail an expense of thousands in early changes and constant repairs. To any one visiting and examining the College as it stands to-day, stability and permanence, as well as eminent fitness, impress themselves upon the mind on every hand. The new water works, referred to last year, are now completed, and are supplying the tanks daily with about 40,000 gallons, being an excess over the united capacity of the tanks of 12,000 gallons. The waste pipes and sewer are thus kept thoroughly flushed, and the healthfulness of the College greatly promoted. The grounds immediately adjacent to the College have been carefully regraded and sodded, the asphaltum walks repaired and new ones added; in short, all traces of the recent destruction completely removed. That all this could have been accomplished and the building ready for occupancy, and re-opened to students on the anniversary of its destruction, is owing largely to the promptness of Friends in furnishing the needed funds, and the energy and efficiency of the Re-Building Committee, into whose hands this great work was committed.

We deem it proper to make mention here of the valuable services of the Chairman of this Committee, Edward H. Ogden, who has given the work unremitting attention during its entire progress.

The Committee has had many difficulties to encounter, having had before it the difficult problem of re-building the College promptly on a substantial and greatly improved basis, and at the same time not to exceed, too far, the resources in hand. Animated by these motives, the Committee has gone forward in the full confidence that friends would promptly make the needed contributions to meet the expenses incurred. One hundred and thirty thousand dollars were received from insurance, and about eighty thousand dollars have been raised by subscription. To meet all the necessary expenses of the construction and refurnishing, including the loss on last year's business, about \$275,000 will be required. This leaves a balance of about \$65,000 still to be made up by subscription.

It is contrary to the usual policy of Friends to incur indebtedness, and a circular has recently been issued asking that the amount of deficit be subscribed before 1st month 1st, 1883, and the necessity of meeting that deficit by executing a mortgage upon the property be thereby obviated. It is hoped that Friends will come forward promptly with subscriptions necessary to secure this result, as otherwise a mortgage must inevitably be placed upon the property early in the coming year.

The present flourishing condition of the School and College warrants the conclusion, that it will continue to be self-supporting in the future as it has been in the past; but it could not be expected that large deficiencies could be made up from current receipts. Friends are therefore earnestly requested to take measures that will place the only College in the country under the care of members of our Religious Society, upon a secure and firm foundation.

12th mo., 4th, 1882. M. FISHER LONGSTRETH, SEC'Y.

The Nominating Committee, having withdrawn for a time, submitted the following nominations:

CLERKS.

Abby M. Woodnutt.

TREASURER.

Robert Biddle.

MANAGERS.

Isaac Stephens, James V. Watson, Clement Biddle, Edmund Webster,

George W. Hancock,

Martha G. McIlvain, Sophia U. Willets, Sallie M. Ogden, Emma McIlvain.

To serve as Tellers, Charles M. Biddle, John T. Willets, and Eli M. Lamb were appointed.

An election by ballot was held, and the tellers reported the above named officers unanimously elected.

William C. Biddle, of Philadelphia, Isaac H. Cock, of New York, and Eli M. Lamb, of Baltimore, were appointed to secure proxies favoring the proposed amendment to the Constitution.

The following resolution was proposed :

Resolved, That this meeting hereby gives its consent to the Board of Managers to exercise their discretion in borrowing money, as is authorized by the charter.

The following amendment was proposed :

Provided, That the same shall not exceed in amount the deficiency on the first day of second month next.

The amendment was agreed to, and the original motion, as amended, was adopted.

On motion, the subject was then reconsidered, the amendment stricken out, and the original resolution adopted.

On motion, then adjourned to meet at the call of the clerk.

GEORGE W. HANCOCK, MATILDA GARRIGUES, Clerks.



COMMITTEE

Trusts, Endownjents 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.

EDWARD H. OGDEN, 314 Vine Street, Philadelphia, Pa.

M. *FISHER LONGSTRETH, Secretary and Treasurer,

Sharon Hill, Del. Co., Pa.