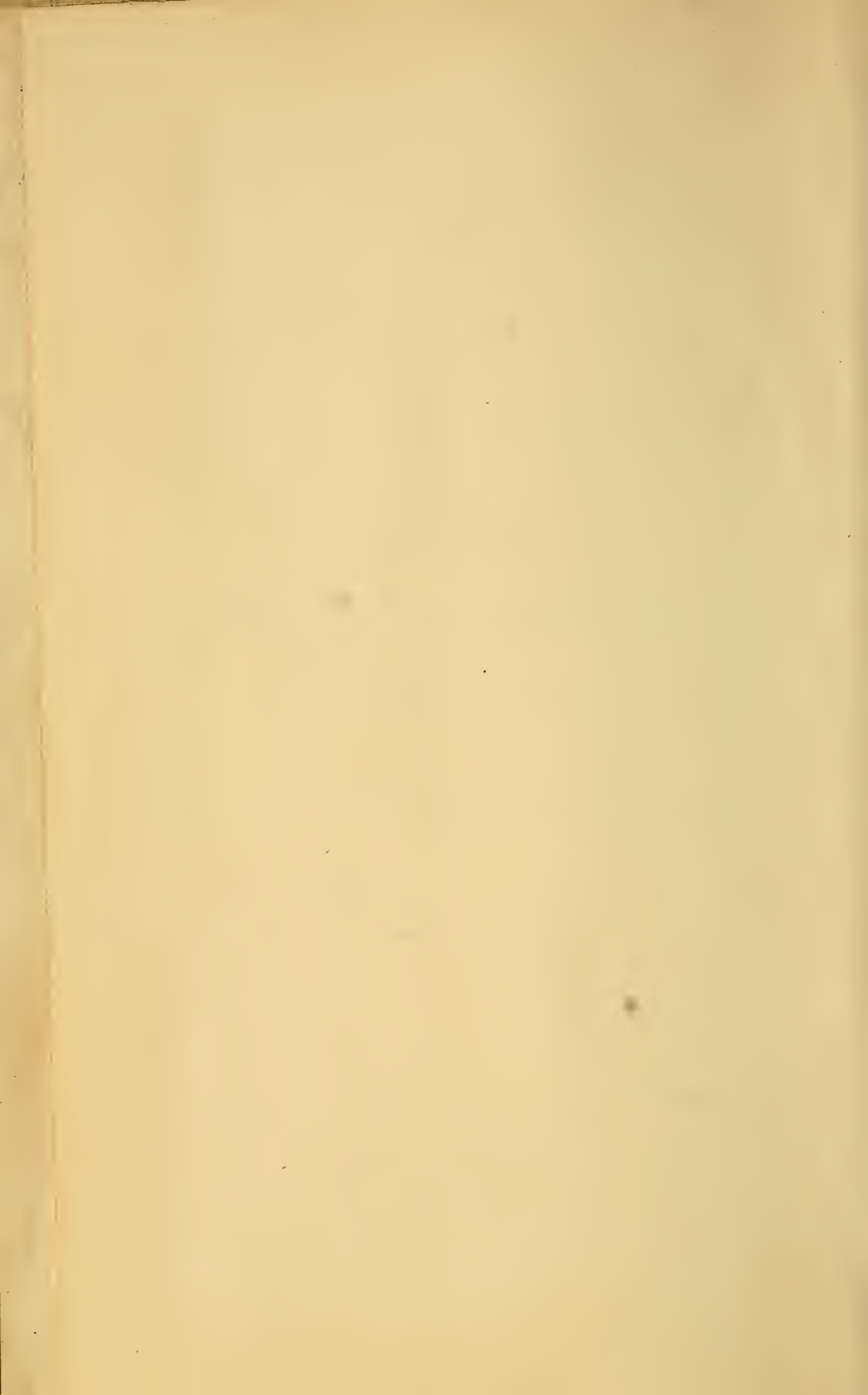


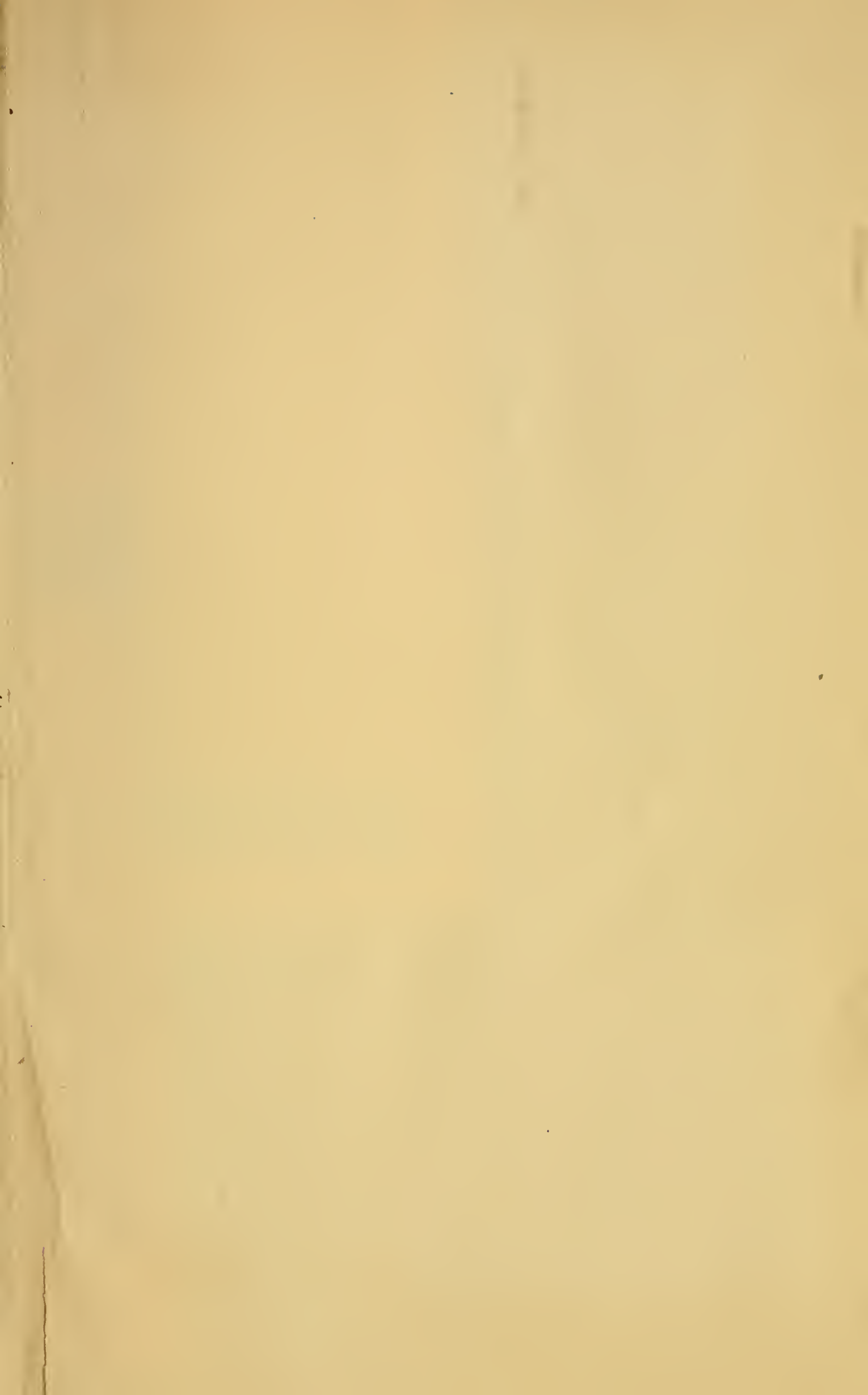
GAT.

No. ....

**BOSTON**  
**MEDICAL LIBRARY**  
**ASSOCIATION,**  
**19 BOYLSTON PLACE.**

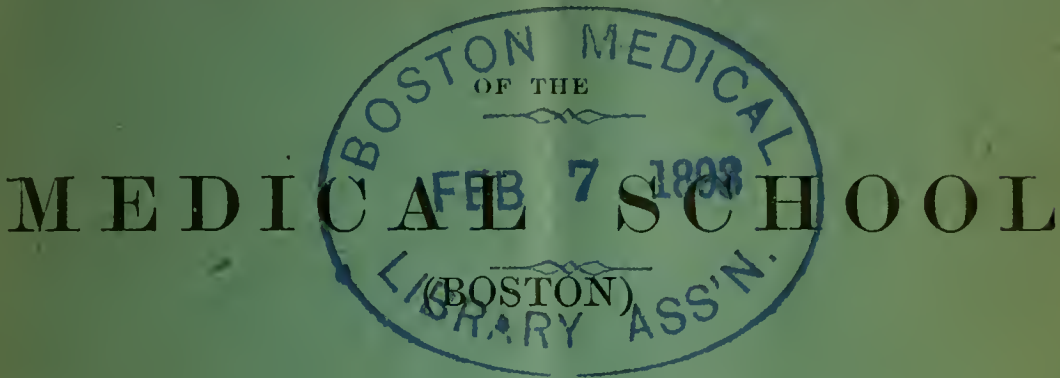








ONE HUNDRED AND EIGHTH  
ANNUAL CATALOGUE



MEDICAL SCHOOL

OF  
HARVARD UNIVERSITY.

1890-91.

[*Reprinted from the Catalogue of the University.*]



CAMBRIDGE, MASS.  
PUBLISHED BY THE UNIVERSITY.

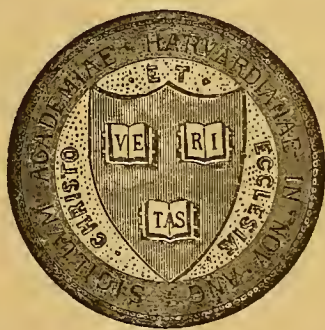
1890.






ONE HUNDRED AND EIGHTH  
ANNUAL CATALOGUE  
OF THE  
MEDICAL SCHOOL  
(BOSTON)  
OF  
HARVARD UNIVERSITY.  
1890-91.

*[Reprinted from the Catalogue of the University.]*



CAMBRIDGE, MASS.  
PUBLISHED BY THE UNIVERSITY  
1890.



Digitized by the Internet Archive  
in 2012 with funding from  
Open Knowledge Commons and Harvard Medical School

<http://www.archive.org/details/annualcatalogueo9091harv>

# THE MEDICAL SCHOOL.

BOSTON.

---

Instruction in this School is given by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed throughout the academic year. The year begins on the Thursday following the last Wednesday in September,\* and ends on the last Wednesday in June. There is a recess at Christmas, beginning December 23, and ending January 2; and a spring recess, beginning on the Wednesday before Fast Day, and ending on the following Tuesday, inclusive.

The course of instruction has been greatly enlarged, and is so arranged as to carry the student progressively and systematically from one subject to another, in a just and natural order.

In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory-work is substituted for, or added to, the usual didactic lectures, and is as much required of every student as attendance at lectures and recitations.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study, to be as ample and full as heretofore. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent in all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course, and have passed a satisfactory examination in the studies of the same.

Instead of the customary oral examination for the degree of Doctor of Medicine, held at the end of the three and four year's period of study, a series of written and oral examinations on all the main subjects of medical instruction has been distributed for regular students through their entire course of study. Every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction, at some time during his period of study.

\* That the time of study shall count as a full term, students of every class must present themselves within the first week of the term and register their names with the Secretary.

1890.							1891.													
JULY.							JANUARY.							JULY.						
Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa
--	--	1	2	3	4	5	--	--	--	--	1	2	3	--	-	--	1	2	3	4
6	7	8	9	10	11	12	4	5	6	7	8	9	10	5	6	7	8	9	10	11
13	14	15	16	17	18	19	11	12	13	14	15	16	17	12	13	14	15	16	17	18
20	21	22	23	24	25	26	18	19	20	21	22	23	24	19	20	21	22	23	24	25
27	28	29	30	31	--	--	25	26	27	28	29	30	31	26	27	28	29	30	31	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST.							FEBRUARY.							AUGUST.						
--	--	--	--	--	1	2	1	2	3	4	5	6	7	--	--	--	--	--	--	1
3	4	5	6	7	8	9	8	9	10	11	12	13	14	2	3	4	5	6	7	8
10	11	12	13	14	15	16	15	16	17	18	19	20	21	9	10	11	12	13	14	15
17	18	19	20	21	22	23	22	23	24	25	26	27	28	16	17	18	19	20	21	22
24	25	26	27	28	29	30	--	--	--	--	--	--	--	23	24	25	26	27	28	29
31	--	--	--	--	--	--	--	--	--	--	--	--	--	30	31	--	--	--	--	--
SEPTEMBER.							MARCH.							SEPTEMBER.						
--	1	2	3	4	5	6	1	2	3	4	5	6	7	--	--	1	2	3	4	5
7	8	9	10	11	12	13	8	9	10	11	12	13	14	6	7	8	9	10	11	12
14	15	16	17	18	19	20	15	16	17	18	19	20	21	13	14	15	16	17	18	19
21	22	23	24	25	26	27	22	23	24	25	26	27	28	20	21	22	23	24	25	26
28	29	30	--	--	--	--	29	30	31	--	--	--	--	27	28	29	30	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCTOBER.							APRIL.							OCTOBER.						
--	--	--	1	2	3	4	--	--	--	1	2	3	4	--	--	--	--	1	2	3
5	6	7	8	9	10	11	5	6	7	8	9	10	11	4	5	6	7	8	9	10
12	13	14	15	16	17	18	12	13	14	15	16	17	18	11	12	13	14	15	16	17
19	20	21	22	23	24	25	19	20	21	22	23	24	25	18	19	20	21	22	23	24
26	27	28	29	30	31	--	26	27	28	29	30	--	--	25	26	27	28	29	30	31
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVEMBER.							MAY.							NOVEMBER.						
--	--	--	--	--	--	1	--	--	--	--	--	1	2	1	2	3	4	5	6	7
2	3	4	5	6	7	8	3	4	5	6	7	8	9	8	9	10	11	12	13	14
9	10	11	12	13	14	15	10	11	12	13	14	15	16	15	16	17	18	19	20	21
16	17	18	19	20	21	22	17	18	19	20	21	22	23	22	23	24	25	26	27	28
23	24	25	26	27	28	29	24	25	26	27	28	29	30	29	30	--	--	--	--	--
30	--	--	--	--	--	--	31	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER.							JUNE.							DECEMBER.						
--	1	2	3	4	5	6	--	1	2	3	4	5	6	--	--	1	2	3	4	5
7	8	9	10	11	12	13	7	8	9	10	11	12	13	6	7	8	9	10	11	12
14	15	16	17	18	19	20	14	15	16	17	18	19	20	13	14	15	16	17	18	19
21	22	23	24	25	26	27	21	22	23	24	25	26	27	20	21	22	23	24	25	26
28	29	30	31	--	--	--	28	29	30	--	--	--	--	27	28	29	30	31	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## CALENDAR.

---

*The meetings of the PRESIDENT AND FELLOWS are held on the second and on the last Monday of every month.*

1890.

- Sept. 25, Thursday.*      **Academic Year begins** in all departments of the University.
- Oct. 8, Wednesday.*      Stated Meeting of the Board of Overseers.
- Oct. 15, Wednesday.*      Stated Meeting of the University Council.
- Nov. 27, Thursday.*      Thanksgiving day; a holiday.
- Dec. 1, Monday.*      Last day for receiving applications for aid from the Loan Fund.
- Dec. 17, Wednesday.*      Stated Meeting of the University Council.

RECESS FROM DEC. 23, 1890, TO JAN. 2, 1891, INCLUSIVE.

1891.

- Jan. 14, Wednesday.*      Stated Meeting of the Board of Overseers.
- Jan. 29, Thursday.*      Second half-year begins in the Medical School.
- Feb. 9, Monday.*      **Second half-year begins** (except in the Medical School).
- Feb. 18, Wednesday.*      Stated Meeting of the University Council.
- Feb. 22, Sunday.*      Washington's Birthday; a holiday.
- March 31, Tuesday.*      Last day for receiving applications for all Graduate Fellowships and Scholarships, and for College Scholarships to be assigned to Graduate Students.
- March 31, Tuesday.*      Last day for re-engaging College Rooms for 1891-92.
- April 1, Wednesday.*      Last day for receiving applications of candidates for Second-Year Honors.

RECESS FROM THE WEDNESDAY BEFORE FAST DAY TO THE FOLLOWING TUESDAY INCLUSIVE.

- April 1, Wednesday.*      Last day for receiving dissertations for the Boylston Medical Prizes.
- April 8, Wednesday.*      Stated Meeting of the Board of Overseers.
- April 29, Wednesday.*      Last day for receiving names of competitors for the Boylston Prizes.

- April 30, Thursday.* Applications from Graduate Students for admission to examination for any degree should be made before this date. See p. 218.
- May 1, Friday.* Last day for receiving applications for Price Greenleaf Aid for 1891-92.
- May 1, Friday.* Last day for receiving dissertations for the Toppan, Dante, Sargent, and Sumner Prizes.
- May 1, Friday.* Last day for receiving theses of Candidates for the degree of Ph.D. or S.D. See p. 222.
- May 1, Friday.* Last day for receiving applications of Professional Students who wish to be candidates for the degree of A.M. with a professional degree. See p. 221.
- May 2, Saturday.* Last day for receiving applications for College Rooms for 1891-92.
- May 2, Saturday.* Assignment of College Rooms for 1891-92.
- May 13, Wednesday.* Stated Meeting of the University Council.
- May 14, Thursday.* Speaking for the Boylston Prizes.
- May 27, Wednesday.* Last day for receiving applications for College Scholarships, and for aid from the Beneficiary Fund.
- May 30, Saturday.* Memorial Day; a holiday.
- June 2, Tuesday.* Examinations in the Medical School begin.
- June 8, Monday.* Examinations in the Dental School begin.
- June 18, Thursday.* Stated Meeting of the University Council.
- June 19, Friday.* Seniors' Class Day.
- June 23, 25-27, Tuesday to Saturday.* Examinations for admission to Harvard College, and to the Lawrence Scientific School.
- June 24, Wednesday.* **Commencement.** Stated Meeting of the Board of Overseers.

SUMMER VACATION OF FOURTEEN WEEKS, FROM COMMENCEMENT DAY  
TO OCTOBER 1.

- June 25, Thursday.* Examinations for admission to the Law and Medical Schools.
- June 29, Monday.* Summer courses in Field Engineering and Physical Training open.
- July 1, Wednesday.* Summer course in Botany opens.
- July 6, Monday.* Summer courses in Chemistry, German, French, and Geology open.

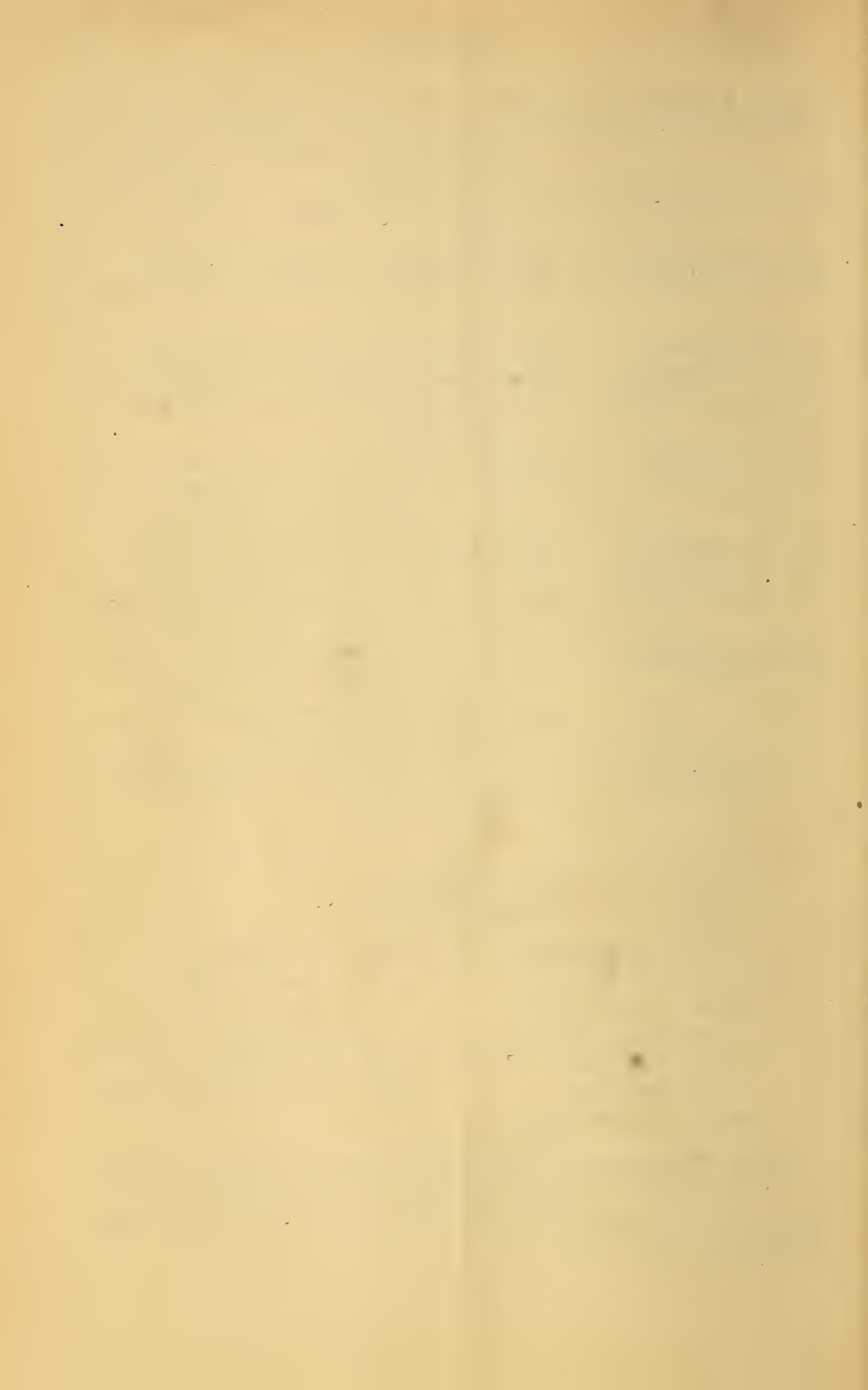
- July 8, Wednesday.* Summer course in Physics opens.
- Sept. 24-26, 28, Thursday to Monday.* Examinations for admission to Harvard College, and to the Lawrence Scientific School.
- Sept. 28, Monday.* Examination for admission to the Medical School.
- Sept. 28, Monday.* Examinations in the Dental School begin.
- Sept. 28, Monday.* Examination for admission to the Dental School.
- Sept. 28, Monday.* Examinations in the Medical School begin.
- Sept. 30, Wednesday.* Annual Meeting of the Board of Overseers.
- Oct. 1, Thursday.* **Academic Year begins** in all departments of the University.
- Oct. 1, Thursday.* Examination for admission to the Law School.
- Oct. 1, 2, Thursday and Friday.* Examination for admission to advanced standing in the Law School.
- Oct. 14, Wednesday.* Stated Meeting of the Board of Overseers.
- Oct. 21, Wednesday.* Stated Meeting of the University Council.
- Oct. 31, Saturday.* Last day for receiving applications of Candidates for Final Honors in 1892. See p. 161.
- Oct. 31, Saturday.* Last day for receiving dissertations for the Bowdoin and Chauncey Wright Prizes.
- Oct. 31, Saturday.* Last day for receiving applications for the Bright and Bigelow Scholarships.
- Dec. 1, Tuesday.* Last day for receiving applications for aid from the Loan Fund.

---

### ABBREVIATIONS.

C.	College House.	H'y.	Holworthy Hall.
D.	Divinity Hall.	M.	Matthews Hall.
D. H.	Divinity House.	S.	Stoughton Hall.
F.	Foxcroft House.	T.	Thayer Hall.
G.	Grays Hall.	W.	Weld Hall.
H.	Hollis Hall.	W. H.	Walter Hastings Hall.
H'ke.	Holyoke House.		

NOTE. — Dormitories within the College grounds are known as Halls; those outside the College grounds, but owned by the University, are called Houses; while others, the property of private owners, are called Blocks or Buildings.





# THE MEDICAL SCHOOL.



## FACULTY.

- CHARLES W. ELIOT, LL.D., *President.*  
HENRY P. BOWDITCH, M.D., *Dean, and Professor of Physiology.*  
FRANCIS MINOT, M.D., *Hersey Professor of the Theory and Practice of Physic.*  
HENRY W. WILLIAMS, M.D., *Professor of Ophthalmology.*  
DAVID W. CHEEVER, M.D., *Professor of Surgery.*  
JAMES C. WHITE, M.D., *Professor of Dermatology.*  
CLARENCE J. BLAKE, M.D., O.M., *Professor of Otology.*  
FRANK W. DRAPER, M.D., *Professor of Legal Medicine.*  
FREDERICK I. KNIGHT, M.D., *Clinical Professor of Laryngology.*  
CHARLES B. PORTER, M.D., *Professor of Clinical Surgery.*  
J. ORNE GREEN, M.D., *Clinical Professor of Otology.*  
AMOS L. MASON, M.D., *Assistant Professor of Clinical Medicine.*  
J. COLLINS WARREN, M.D., *Associate Professor of Surgery.*  
REGINALD H. FITZ, M.D., *Shattuck Professor of Pathological Anatomy.*  
WILLIAM L. RICHARDSON, M.D., *Professor of Obstetrics.*  
THOMAS DWIGHT, M.D., LL.D., *Parkman Professor of Anatomy.*  
EDWARD S. WOOD, M.D., *Professor of Chemistry.*  
FREDERICK C. SHATTUCK, M.D., *Jackson Professor of Clinical Medicine.*  
WILLIAM H. BAKER, M.D., *Professor of Gynaecology.*  
T. M. ROTCH, M.D., *Assistant Professor of the Diseases of Children.*  
WILLIAM B. HILLS, M.D., *Associate Professor of Chemistry.*  
WILLIAM F. WHITNEY, M.D., *Curator of the Anatomical Museum.*  
CHARLES S. MINOT, S.D., *Assistant Professor of Histology and Embryology.*  
MAURICE H. RICHARDSON, M.D., *Assistant Professor of Anatomy.*  
FRANCIS H. WILLIAMS, M.D., *Assistant Professor of Therapeutics.*  
SAMUEL J. MIXTER, M.D., *Demonstrator of Anatomy.*  
CHARLES HARRINGTON, M.D., *Instructor in Materia Medica and Hygiene, and Assistant in Chemistry.*

## OTHER INSTRUCTORS.

THEODORE W. FISHER, M.D., *Lecturer on Mental Diseases.*

SAMUEL H. DURGIN, M.D., *Lecturer on Hygiene.*

HENRY P. QUINCY, M.D., *Instructor in Histology.*

FRANCIS A. HARRIS, M.D., *Demonstrator of Medico-legal Examinations.*

JAMES J. PUTNAM, M.D., *Instructor in Diseases of the Nervous System.*

ELBRIDGE G. CUTLER, M.D., *Instructor in the Theory and Practice of Physic.*

EDWARD H. BRADFORD, M.D., *Instructor in Surgery and Orthopedics.*

FRANCIS H. DAVENPORT, M.D., *Instructor in Gynaecology.*

EDWARD M. BUCKINGHAM, M.D., *Instructor in Diseases of Children.*

GEORGE M. GARLAND, M.D., *Instructor in Clinical Medicine.*

JOSEPH W. WARREN, M.D., *Instructor in Physiology.*

JOHN W. ELLIOT, M.D., *Assistant in Clinical Surgery.*

WILLIAM W. GANNETT, M.D., *Instructor in Pathology and Auscultation.*

CHARLES M. GREEN, M.D., *Instructor in Obstetrics.*

FRANKLIN H. HOOPER, M.D., *Instructor in Laryngology.*

CHARLES F. WITHINGTON, M.D., *Assistant in Clinical Medicine.*

WILLIAM C. EMERSON, M.D., *Assistant in Chemistry.*

GEORGE H. MONKS, M.D., *Assistant in Clinical and Operative Surgery.*

FRANCIS S. WATSON, M.D., *Assistant in Clinical Surgery.*

HERBERT L. BURRELL, M.D., *Assistant in Clinical Surgery, and Demonstrator of Surgical Appliances.*

HAROLD C. ERNST, M.D., *Instructor in Bacteriology.*

CHARLES P. STRONG, M.D., *Assistant in Gynaecology.*

FRANK B. HARRINGTON, M.D., *Assistant in Clinical Surgery.*

THOMAS F. SHERMAN, M.D., *Assistant in Diseases of Children.*

HERMAN F. VICKERY, M.D., *Instructor in Clinical Medicine.*

WILLIAM M. CONANT, M.D., *Assistant Demonstrator of Anatomy.*

HENRY JACKSON, M.D., *Assistant in Bacteriology.*

JOHN C. MUNRO, M.D., *Assistant in Anatomy.*

EDWARD REYNOLDS, M.D., *Assistant in Obstetrics.*

CHARLES W. TOWNSEND, M.D., *Assistant in Obstetrics.*

CHARLES L. SCUDDER, M.D., *Assistant in Clinical Surgery.*

CHARLES P. WORCESTER, M.D., *Assistant in Chemistry, and Secretary of the Medical Faculty.*

WILLIAM S. BRYANT, M.D., *Assistant in Anatomy.*

FRANK B. MALLORY, M.D., *Assistant in Histology.*

EDWARD S. ABBOT, A.B., *Assistant in Histology.*

The following gentlemen will give special clinical instruction:—

JOHN HOMANS, M.D., *in the Diagnosis and Treatment of Ovarian Tumors.*

EDWARD COWLES, M.D., *in Mental Diseases.*

FRANCIS B. GREENOUGH, M.D., and ABNER POST, M.D., *in Syphilis.*

OLIVER F. WADSWORTH, M.D., *in Ophthalmoscopy.*

O. W. DOE, M.D., *in Gynaecology.*

GEORGE W. GAY, M.D., *in Surgery.*

ARTHUR T. CABOT, M.D., and FRANCIS S. WATSON, M.D., *in Genito-urinary Surgery.*

GEORGE H. TILDEN, M.D., *in Dermatology and Syphilis.*

GEORGE L. WALTON, M.D., and PHILIP C. KNAPP, M.D., *in Diseases of the Nervous System.*

JOHN B. SWIFT, M.D., *in Diseases of Women.*

## STUDENTS.

## IN COURSES FOR GRADUATES.

1889-90.\*

Bancroft, Edward Erastus, M.D.	<i>Wellesley.</i>
Chase, Joseph, Jr., M.D.	<i>E. Weymouth.</i>
Clark, Joseph Eddy, M.D.	<i>Medford.</i>
Crowell, Samuel, M.D.	<i>Dorchester.</i>
Garrison, John Cushing, M.D.	<i>Franklin.</i>
Garland, William Russell, M.D.	<i>Campton Village, N. H.</i>
Gatchell, Willis Le Forest, M.D.	<i>Boston.</i>
Holmes, Horatio Reese, M.D.	<i>Salem, Oregon.</i>
Perry, Arthur Pedro, M.D.	<i>Jamaica Plain.</i>
Reynolds, Henry Vose, M.D.	<i>Dorchester.</i>
Sanborn, Putnam Perler, M.D.	<i>Fremont, Ind.</i>
Stevens, George Beckwith, M.D.	<i>Boston.</i>
Whitten, George Edwin, M.D.	<i>Lawrence.</i>
Worcester, Alfred, M.D.	<i>Waltham.</i>

1890-91.

Bradford, Edward Hickling A.B., M.D.	<i>Boston.</i>
Crowell, Samuel, M.D.	<i>Dorchester.</i>
Eldridge, David Gorham, M.D.	<i>Dorchester.</i>
Fay, Joseph Henry, M.D.	<i>Fall River.</i>
Field, James Brainerd, A.B., M.D.	<i>Lowell.</i>
Gage, James Arthur, A.M., M.D.	<i>Lowell.</i>
Gerry, Edwin Peabody, A.B., M.D.	<i>Jamaica Plain.</i>
Haines, George B., M.D.	<i>Valley Falls, R. I.</i>
Hill, Gershom Hyde, M.D.	<i>Independence, Ia.</i>
Hubbard, Frank Allen, A.B., M.D.	<i>Taunton.</i>
Litch, John Goodrich, M.D.	<i>Boston.</i>
Rolfe, William Alfred, M.D.	<i>Chili.</i>
Scudder, Charles Locke, A.B., M.D.	<i>Boston.</i>
Soule, Horace John, M.D.	<i>Winthrop.</i>
Stevens, Serial, M.D.	<i>Cambridgeport.</i>
Terry, Charles Church, M.D.	<i>Fall River.</i>
Urie, John Francis, M.D. (Surg. U. S. N.),	<i>Boston.</i>
Walker, Maurice Anson, M.D.	<i>Denver, Col.</i>
Welch, Edward John, A.B., M.D.	<i>Boston.</i>

\* After the issue of the Catalogue.

## FOURTH CLASS.

Ames, John Lincoln, A.B. 1887,	<i>Waltham.</i>
Blake, John Bapst, A.B. 1887,	<i>Boston.</i>
Bowker, Everett M.,	<i>Brookline.</i>
Brooks, William Allen, A.B. 1887,	<i>Haverhill.</i>
Bryant, Edward Gilman,	<i>Roxbury.</i>
Crockett, Eugene Anthony,	<i>W. Newton.</i>
Curtis, Henry Fuller, A.B. ( <i>Colby Univ.</i> ) 1887,	<i>Kennebunk, Me.</i>
Dudley, James Willard, A.B. 1887,	<i>Warsaw, N. Y.</i>
Faulkner, William Edward, A.B. 1887,	<i>Keene, N. H.</i>
Grimes, Warren Parker,	<i>Hillsboro' Br., Me.</i>
Gross, Harold Gordon, S.B. ( <i>Mass. Inst. of Tech.</i> ) 1888,	<i>Eureka, Cal.</i>
Houghton, Silas Arnold, A.B. 1887,	<i>Charlestown.</i>
Jackson, James Marsh, A.B. 1887,	<i>Roxbury.</i>
Knowlton, Herbert Eugene,	<i>Belfast, Me.</i>
Lothrop, Howard Augustus, A.B. 1887,	<i>Sharon.</i>
McPherson, William Ellsworth,	<i>Canton.</i>
Morgan, Lewis Edson,	<i>Boston.</i>
Morse, John Lovett, A.B. 1887,	<i>Taunton.</i>
Pratt, Charles Augustus, A.B. 1886,	<i>E. Somerville.</i>
Proctor, Frank Ingersoll, A.B. 1887,	<i>Boston.</i>
Robinson, Thomas Johns, A.B. 1887,	<i>E. Taunton.</i>
Slattery, John Richard, A.B. ( <i>Georgetown Coll.</i> ) 1885,	<i>So. Boston.</i>
Strong, James Henry,	<i>E. Boston.</i>
Walker, Lewis Marshall,	<i>Boston.</i>
Washburne, Elliott,	<i>Taunton.</i>
Whitmarsh, Willard Francis, A.B. ( <i>Amherst Coll.</i> ) 1887,	<i>N. Abington.</i>

## THIRD CLASS.

August, Albert,	<i>Roxbury.</i>
Baker, Frederick Herbert,	<i>Billerica.</i>
Balch, Franklin Greene, A.B. 1888,	<i>Jamaica Plain.</i>
Bowman, Fred Raymond, A.B. ( <i>Colby Univ.</i> ) 1887,	<i>Sidney, Me.</i>
Brough, David Dandie, A.B. ( <i>Princeton Coll.</i> ) 1888,	<i>Providence, R. I.</i>
Cabot, Follen,	<i>Brookline.</i>
Cavanagh, Charles Russell,	<i>Mattapan.</i>
Clark, Sidney Avery, A.B. ( <i>Amherst Coll.</i> ) 1888,	<i>Northampton.</i>
Clarke, Elisha Davis, PH.B. ( <i>Alfred Univ.</i> ) 1888,	<i>Hope Val, R. I.</i>

Cogswell, George Proctor, A.B. 1888,	<i>Cambridge.</i>
Collier, Lawrence Henry,	<i>E. Cambridge.</i>
Covell, Henry Hall, A.B. ( <i>Yale Univ.</i> ) 1888,	<i>Rochester, N. Y.</i>
Dane, John, A.B. 1888,	<i>Boston.</i>
Davis, Frederick Augustus, B.S. ( <i>Mass. Agric. Coll.</i> ) 1887,	<i>Lynn.</i>
Donovan, Henry Vincent,	<i>Lawrence.</i>
Edson, Carroll Everett, A.B. 1888,	<i>Roxbury.</i>
Fox, Charles Leonard,	<i>Lowell.</i>
Francis, Carleton Shurtleff, A.B. 1888,	<i>Brookline.</i>
Fraser, Donald Allan,	<i>E. Boston.</i>
Frothingham, Richard,	<i>Charlestown.</i>
Giblin, Frank Joseph,	<i>So. Boston.</i>
Gorey, James Philip,	<i>Fitchburg.</i>
Harwood, Charles Hamant, A.B. 1888,	<i>Boston.</i>
Higgins, Frank Albert, S.B. ( <i>Worcester Polytechnic Inst.</i> ) 1886,	<i>Manchester, N. H.</i>
Holder, Oscar Howe, A.B. 1888,	<i>Boston.</i>
Hoyt, Edward Malcolm,	<i>Wentworth, N. H.</i>
Jewett, Fred Bryce, A.B. ( <i>Amherst Coll.</i> ) 1888,	<i>Ballston, N. Y.</i>
Keleher, William Henry,	<i>Woburn.</i>
Lane, Francis Augustus,	<i>Peabody.</i>
Leahey, George Henry Aloysius,	<i>Lowell.</i>
Lund, Fred Bates, A.B. 1888,	<i>Concord, N. H.</i>
Lyons, Christopher Philip,	<i>E. Boston.</i>
McCarthy, John Coakley,	<i>Malden.</i>
McKenna, Francis Patrick,	<i>So. Boston.</i>
Macdonald, William Huntley, A.B. ( <i>St. Francis Xavier Coll.</i> ) 1888,	<i>Antigonishe, N. S.</i>
Miller, Henry Cowles, A.B. 1886,	<i>Melrose.</i>
Mitchell, Edgar Ormsby,	<i>Newburgh, N. Y.</i>
Moran, John Joseph,	<i>So. Boston.</i>
Morris, George Patrick, A.B. 1883,	<i>Boston.</i>
Murphy, Timothy Joseph, A.B. ( <i>Boston Coll.</i> ) 1888,	<i>Roxbury.</i>
Nelson, Charles Danforth,	<i>Boston.</i>
Nichols, John Holyoke,	<i>Danvers.</i>
Pease, Edward Allen, A.B. 1888,	<i>Boston.</i>
Perkins, Jay,	<i>Penobscot, Me.</i>
Porter, Charles Allen, A.B. 1888,	<i>Boston.</i>
Post, Alfred Charles,	<i>Boston.</i>
Powers, Edward Joseph, A.B. ( <i>Holy Cross Coll.</i> ) 1888,	<i>E. Boston.</i>

Raddin, Frederic Stocker, A.B. ( <i>King's Coll.</i> ) 1888,	<i>Chelsea.</i>
Redmond, James William,	<i>Boston.</i>
Risk, Winthrop Allen,	<i>Providence, R. I.</i>
Robbins, Fred Gibson,	<i>Salem.</i>
Rowen, Henry Stanislaus,	<i>Cambridge.</i>
Sawyer, Walter Fairbanks,	<i>Keene, N. H.</i>
Scannell, Michael Edward,	<i>Lawrence.</i>
Senay, Joseph,	<i>Salem.</i>
Sheehan, William Joseph, A.B. ( <i>Boston Coll.</i> ) 1888,	<i>Peabody.</i>
Shepard, Thomas Osborne, A.B. 1888,	<i>Salem.</i>
Stacey, Charles Franklin,	<i>Charlestown.</i>
Stebbins, Walter Gay, A.B. ( <i>Yale Univ.</i> ) 1886,	<i>Springfield.</i>
Stowell, Edmund Channing, A.B. 1888,	<i>Boston.</i>
Taylor, Edward Wyllys, A.B. 1888,	<i>Montclair, N. J.</i>
Tenney, Benjamin, A.B. ( <i>Dartmouth Coll.</i> ) 1883, A.M. ( <i>Ibid.</i> ) 1887,	<i>Boston.</i>
Toomey, John Peter,	<i>E. Boston.</i>
Tower, Frederick Russell,	<i>Boston.</i>
Towle, Harvey Parker, A.B. 1888,	<i>Somerville.</i>
Tracy, Edward Aloysius,	<i>So. Boston.</i>
Tully, Edward Joseph,	<i>Lowell.</i>
Tuttle, George Herman, A.B. 1887,	<i>Acton Centre.</i>
Webster, Jonathan Edwards,	<i>Peabody.</i>
Wheeler, Charles Douglas, A.B. ( <i>Williams Coll.</i> ) 1888,	<i>Worcester.</i>
Whipple, Farrington Hasham, A.B. 1888,	<i>Portland, Me.</i>
Wynne, Sidney Yale,	<i>Deerfield.</i>

## SECOND CLASS.

Achard, Hermann Jacoby,	<i>Basel, Switzerland.</i>
Ash, John Henry,	<i>No. Weymouth.</i>
Bates, Frederick Seward, A.B. 1890,	<i>Newton.</i>
Bicknell, William Horace,	<i>No. Weymouth.</i>
Bowles, George Hall, A.B. ( <i>Dartmouth Coll.</i> ) 1884,	<i>Plymouth, N. H.</i>
Brewster, George Washington Wales, A.B. 1889,	<i>Roxbury.</i>
Cabot, Richard Clarke, A.B. 1889,	<i>Brookline.</i>
Chase, Arthur Brown,	<i>Lynn.</i>
Chase, Richard Fitch,	<i>Baldwin, Me.</i>
Cobb, Farrar Crane, A.B. 1890,	<i>Dorchester.</i>

Cogswell, Charles Frederick, A.B. 1889,	<i>Charlestown.</i>
Craig, Daniel Hiram,	<i>Malden.</i>
Cunningham, Joseph Henry,	<i>Somerville.</i>
Cutler, George Washington,	<i>Waltham.</i>
Daly, Richard Francis,	<i>Boston.</i>
Davis, Abel Albert,	<i>Brooklyn, N. Y.</i>
Deal, George Francis,	<i>E. Boston.</i>
DeLue, Frederick Spaulding,	<i>Roxbury.</i>
Donahue, William Francis, A.B. ( <i>Holy Cross Coll.</i> ) 1889,	<i>Worcester.</i>
Dunlap, Charles Bates, A.B. 1889,	<i>Indian Creek, W. Va.</i>
Edmonds, Louis,	<i>Boston.</i>
Edwards, William Lanergan,	<i>Boston.</i>
Emerson, Herbert Clark, A.B. ( <i>Amherst Coll.</i> ) 1889,	<i>Newton.</i>
Ferguson, Charles John,	<i>So. Boston.</i>
Foy, Joseph McHale,	<i>Roxbury.</i>
Frost, N. Alford,	<i>Derry, N. H.</i>
Gallivan, William Joseph, A.B. 1888,	<i>Boston.</i>
Gay, Warren Fisher, A.B. 1890,	<i>Boston.</i>
Goodale, Joseph Lincoln, A.B. 1889,	<i>Cambridge.</i>
Hamilton, Edward Sylvester, A.B. ( <i>Holy Cross Coll.</i> ) 1888,	<i>Holliston.</i>
Hardon, Robert Wallace,	<i>Newton.</i>
Harlow, George Arthur, A.B. ( <i>Amherst Coll.</i> ) 1889,	<i>Augusta, Me.</i>
Hastings, Robert Worthington, A.B. ( <i>Amherst Coll.</i> ) 1888,	<i>Warren.</i>
Hodges, Almon Danforth, A.B. 1889,	<i>Roxbury.</i>
Ilsley, Frederick Roscoe,	<i>Chelsea.</i>
Jordan, Charles Harold,	<i>Winchester.</i>
Keany, Francis Joseph, A.B. ( <i>Boston Coll.</i> ) 1888,	<i>Boston.</i>
Keith, Frederick Scott,	<i>Waltham.</i>
Knapp, Edgar Jonas,	<i>Menomonie, Wis.</i>
Lane, Frederick Douglas,	<i>Lawrence.</i>
Leahy, Thomas Joseph, A.B. ( <i>Holy Cross Coll.</i> ) 1888,	<i>Cambridge.</i>
Leary, Timothy,	<i>Waltham.</i>
Libby, Jesse Herbert,	<i>Charlestown.</i>
Littlefield, Samuel Horace,	<i>Roxbury.</i>
Loveland, John Elijah, A.B. ( <i>Wesleyan Univ.</i> ) 1889,	<i>Middletown, Conn.</i>
MacNichol, George Pope,	<i>Calais, Me.</i>



Manahan, Herbert Wellington,	<i>Lawrence.</i>
Merrick, Robert Michael,	<i>Dorchester.</i>
Mongan, Charles Edward, A.B. ( <i>Boston Coll.</i> ) 1883,	<i>Somerville.</i>
Moran, Horace Sheridan, A.B. ( <i>Williams Coll.</i> ) 1889,	<i>Wakefield.</i>
Murphy, John Henry,	<i>Boston.</i>
Norton, Rupert,	<i>Cambridge.</i>
Oakey, Daniel,	<i>Cambridge.</i>
O'Brien, Denis Aloysius, A.B. ( <i>Holy Cross Coll.</i> ) 1888,	<i>Lewiston, Me.</i>
O'Brien, John Francis, A.B. ( <i>Boston Coll.</i> ) 1888,	<i>Charlestown.</i>
O'Donnell, Louis Patrick,	<i>Plymouth.</i>
Ogden, Jay Bergen,	<i>Rochester, N. Y.</i>
Phelps, John Samuel, A.B. 1889,	<i>Lynn.</i>
Phillips, James Lee,	<i>Boston.</i>
Ronayne, David Patrick, A.B. ( <i>Holy Cross Coll.</i> ) 1889,	<i>Worcester.</i>
Ruppel, Emil Fraser,	<i>Boston.</i>
Selva, Julio, A.B. ( <i>Coll. of Nicaragua</i> ),	<i>Boston.</i>
Shaw, John Holbrook,	<i>Plymouth.</i>
Shurtleff, George Frederick,	<i>Westfield.</i>
Silva, Francis Pierce,	<i>Charlestown.</i>
Smith, Charles Morton,	<i>Harrisville, N. H.</i>
Smith, George Seeley,	<i>Portland, Me.</i>
Snow, Wallace,	<i>Boston.</i>
Spencer, George Albert,	<i>Ipswich.</i>
Starr, Frederick Ratchford,	<i>Boston.</i>
Stevens, Charles Benjamin, A.B. ( <i>Amherst Coll.</i> ) 1887,	<i>Worcester.</i>
Thayer, Eugene, A.B. ( <i>Amherst Coll.</i> ) 1889,	<i>Boston.</i>
Tirrell, Vincent Meader,	<i>So. Weymouth.</i>
Varnum, Francis Joseph, A.B. ( <i>Holy Cross Coll.</i> ) 1889,	<i>Boston.</i>
White, Verdeil Oberon, A.B. ( <i>Bowdoin Coll.</i> ) 1889,	<i>Wilton, Me.</i>
Wilder, Raymond Sargent, A.B. 1889,	<i>Cambridge.</i>
Young, Charles Oscar, A.B. ( <i>Augustana Coll.</i> ) 1888,	<i>Lindsborg, Kan.</i>

## FIRST CLASS.

Almy, Arthur Pickering,	<i>Fall River.</i>
Barnes, Francis Henry, A.B. ( <i>Holy Cross Coll.</i> ) 1890,	<i>Fitchburg.</i>
Barney, George Lawrence, A.B. 1890,	<i>Cambridge.</i>
Bennett, Frederick Sherwin,	<i>Brighton.</i>
Billings, William Chester,	<i>Springfield.</i>
Boyd, Wendell Charles,	<i>Linneus, Me.</i>
Boynton, Edwin Dana,	<i>Harrington, Me.</i>
Bragg, Frank Adelbert,	<i>Agawam.</i>
Bullard, Stephen Eliot,	<i>Boston.</i>
Burnham, Elmond Arthur, A.B. ( <i>Tufts Coll.</i> ) 1889,	<i>Everett.</i>
Burnham, Elisha Bennett,	<i>Essex.</i>
Cahill, John Thomas, A.B. ( <i>Holy Cross Coll.</i> ) 1890,	<i>Lawrence.</i>
Carleton, Dudley,	<i>Norwich, Conn.</i>
Carleton, Ralph,	<i>Norwich, Conn.</i>
Carr, Frank Fletcher, A.B. ( <i>Williams Coll.</i> ) 1890,	<i>Concord.</i>
Carroll, Edward Francis,	<i>Rumford, R. I.</i>
Carter, Theron Harlow, A.M. ( <i>Brown Univ.</i> ) 1888,	<i>Bristol, R. I.</i>
Chapman, Lorenzo,	<i>Amherst, N. S.</i>
Cody, Edmond Francis,	<i>Taunton.</i>
Coffin, Rockwell Augustus,	<i>Bangor, Me.</i>
Cogswell, William, Jr., A.B. ( <i>Dartmouth Coll.</i> ) 1890,	<i>Salem.</i>
Cook, Frank Clarendon,	<i>Boston.</i>
Coolidge, John Nelson, A.B. ( <i>Amherst Coll.</i> ) 1889,	<i>Leicester.</i>
Cotton, Frederic Jay, A.B. 1890,	<i>Newport, R. I.</i>
Coues, William Pearce,	<i>Cambridge.</i>
Courtney, Joseph William, A.B. 1890,	<i>E. Cambridge.</i>
Craig, Francis, A.B. ( <i>Manhattan Coll.</i> ) 1889,	<i>Providence, R. I.</i>
Cutler, James Tucker, A.B. ( <i>Williams Coll.</i> ) 1890,	<i>Dorchester.</i>
Daly, William Joseph,	<i>Boston.</i>
Darling, Eugene Abraham, A.B. 1890,	<i>Troy, N. Y.</i>
Davenport, Charles Albert, A.B. 1890,	<i>Watertown.</i>
Deane, William Brecke, A.B. ( <i>Brown Univ.</i> ) 1889,	<i>Ogdensburg, N. Y.</i>
DeCoster, Harry Wilson, PH.G. ( <i>Mass. Coll. Pharmacy</i> ), 1890,	<i>Lynn.</i>

Dennett, John, Jr.,	<i>York Village, Me.</i>
DeOlloqui, Rufino Augustin, A.B. ( <i>St. Joseph's Coll.</i> ) 1889,	<i>Kingston, N. B.</i>
Donnelly, John Bernard, A.B. ( <i>Holy Cross Coll.</i> ), 1890,	<i>W. Fitchburg.</i>
Donovan, William Edward,	<i>Boston.</i>
Doogue, William Aloysious,	<i>Boston.</i>
Drown, Edward Payson, A.B. ( <i>Amherst Coll.</i> ) 1889,	<i>Keene, N. H.</i>
Duel, Arthur Baldwin,	<i>Granville, N. Y.</i>
Erb, Theodore Charles,	<i>Boston.</i>
Ewald, Carl Adolf, A.B. 1888,	<i>Newton, N. J.</i>
Fairbanks, Arthur Willard,	<i>W. Roxbury.</i>
Farenholt, Ammen,	<i>Malden.</i>
Farrington, Leander Morton,	<i>Portsmouth, N. H.</i>
Flynn, Harry Sherman,	<i>Woodstock, Conn.</i>
Fuller, Frederick Henry,	<i>Rockland.</i>
Furber, Edwin Edgerton,	<i>Bridgewater, Vt.</i>
Gage, Edward Franklin, A.B. ( <i>Amherst Coll.</i> ) 1888,	<i>Amherst.</i>
Gates, Stephen Mason,	<i>Worcester.</i>
Giblin, James John,	<i>Roxbury.</i>
Grant, Harry Linwood, A.B. ( <i>Brown Univ.</i> ) 1890,	<i>Providence.</i>
Groll, Edward Wright,	<i>Roxbury.</i>
Hall, Herbert James,	<i>Manchester, N. H.</i>
Hammond, Philip,	<i>Haverhill.</i>
Harris, William Lincoln, B.S. ( <i>Mass. Inst. of Tech.</i> ) 1888,	<i>Boston.</i>
Haskell, Harry Hill, A.B. 1890,	<i>Auburndale.</i>
Hearn, Thomas Henry,	<i>Boston.</i>
Henshaw, George Bridges, A.B. 1890,	<i>Cambridge.</i>
Hewes, Harry Fox, A.B. 1890.	<i>Cambridge.</i>
Higbee, Frank Osear, B.S. ( <i>Carleton Coll.</i> ) 1890,	<i>St. Paul, Minn.</i>
Hill, Edmund Emerson,	<i>Candia, N. H.</i>
Hill, George Hillard,	<i>Worcester.</i>
Hodgkins, Chester Lyman,	<i>W. Roxbury.</i>
Houghton, Henry Lincoln, B.S. ( <i>Worcester Polytech. Inst.</i> ) 1889,	<i>Worcester.</i>
Humphrey, Orman Brown,	<i>Bangor, Me.</i>
Jamieson, Henry Verner,	<i>Melrose.</i>
Johnson, Orville Edson, PH.B. ( <i>Wesleyan Univ.</i> ) 1889,	<i>Winthrop.</i>
Jones, Claude Perry,	<i>Chelsea.</i>

Jones, William Marks, A.B. 1890,	<i>Newton.</i>
Judge, Albert Augustine, A.B. ( <i>Holy Cross Coll.</i> )	
1888,	<i>Roxbury.</i>
Keenan, Herbert John,	<i>Boston.</i>
Kelley, Dennis Michael, A.B. ( <i>Boston Coll.</i> ) 1890,	<i>Stoughton.</i>
Kennard, Harry Delano,	<i>E. Somerville.</i>
Kinyon, Elmer Lawton, A.B. 1890,	<i>Syracuse, N. Y.</i>
Klagge, Heinrich Frederick,	<i>E. Boston.</i>
Lane, Thomas Joseph,	<i>Roxbury.</i>
Legasey, George Joseph,	<i>Worcester.</i>
Lindström, Alfred Herman,	<i>Lowell.</i>
Lord, Sidney Arthur,	<i>Boston.</i>
Lovewell, Henry Plummer, A.B. ( <i>Brown Univ.</i> )	
1889,	<i>Providence, R. I.</i>
Lynam, Frank, A.B. ( <i>Bowdoin Coll.</i> ) 1889,	<i>Bar Harbor, Me.</i>
Lyons, Joseph Benedict,	<i>Charlestown.</i>
Mansfield, Henry Kimball,	<i>Salem.</i>
Mason, Alan Gregory, A.B. 1886,	<i>Boston.</i>
McKenzie, John Robert,	<i>Cambridge.</i>
McLaughlin, Daniel Joseph, A.B. ( <i>Boston Coll.</i> )	
1888,	<i>Boston.</i>
McLeod, Percy DeMille,	<i>Boston.</i>
McManus, John Joseph,	<i>Rutland, Vt.</i>
McSweeney, Daniel Justin, A.B. ( <i>Boston Coll.</i> )	
1889,	<i>Boston.</i>
Morse, Almon Gardner, A.B. 1890,	<i>Boston.</i>
Murphy, Charles Oscar,	<i>Taunton.</i>
Page, Albert Kidder,	<i>Boston.</i>
Page, Calvin Gates, A.B. 1890,	<i>Boston.</i>
Pearl, Frederic Warren, A.B. ( <i>Williams Coll.</i> )	
1890,	<i>Bradford.</i>
Peirce, Charles Cushman,	<i>Dover, N. H.</i>
Perley, Roscoe Damon,	<i>Ipswich.</i>
Phillips, Lewis Walter,	<i>Johnston, R. I.</i>
Piper, Frank, PH.G. ( <i>Mass. Coll. Pharmacy</i> )	
1889,	<i>Charlestown, N. H.</i>
Reardon, Timothy Joseph,	<i>Charlestown.</i>
Richardson, Mark Wyman, A.B. 1889,	<i>Boston.</i>
Roberts, James Stanton,	<i>W. Lebanon, Me.</i>
Robinson, Gilman Parker,	<i>So. Attleborough.</i>
Robinson, William Henry,	<i>Charlestown.</i>
Rourke, Joseph Edward, A.B. 1890,	<i>Dorchester.</i>
Russell, Simon James, A.B. ( <i>Holy Cross Coll.</i> )	

1890,	<i>Springfield.</i>
Sargent, Ara Nathaniel, A.B. 1890,	<i>Salem.</i>
Saunders, Ambrose Courtis, A.B. 1889,	<i>Cambridge.</i>
Shaw, Albert Joel,	<i>Boston.</i>
Shaw, Arthur John,	<i>Boston.</i>
Smith, Arthur Vincent, A.B. ( <i>Bowdoin Coll.</i> )	
1890,	<i>Middleborough.</i>
Smith, Harry Winfield, A.B. ( <i>Tufts Coll.</i> ) 1890,	<i>Lynn.</i>
Smith, Lonan Jason,	<i>Boston.</i>
Sprague, John Lovell, Jr.	<i>Providence, R. I.</i>
Starbird, Edward Perley,	<i>Dorchester.</i>
Steese, Edwin Sturtevant,	<i>Brookline.</i>
Stone, James Savage, A.B. 1889,	<i>Newton.</i>
Sullivan, David Augustus,	<i>So. Boston.</i>
Sweet, Charles Frederick,	<i>Central Falls, R. I.</i>
Swett, Percy Walter,	<i>Boston.</i>
Thompson, Harry John,	<i>Rutland, Vt.</i>
Thorndike, Townsend William,	<i>Boston.</i>
Treanor, John Peter,	<i>Boston.</i>
Warren, Hobert Endicott,	<i>Cambridge.</i>
Waterman, Jerome Hilton,	<i>Buffalo, N. Y.</i>
Watts, Henry Fowler Rausford,	<i>Boston.</i>
Waughop, Philip Rexford, A.B. 1890,	<i>Fort Steilacoom, Wash.</i>
Weir, Edward Andrew,	<i>Harrison, Neb.</i>
West, George Leon, A.B. 1890,	<i>Roslindale.</i>
Wheate, Arthur Fitts,	<i>Manchester, N. H.</i>
Wheeler, Alfred Augustus,	<i>Leominster.</i>
White, Charles James, A.B. 1890,	<i>Boston.</i>
Wight, Frank Seth,	<i>Caryville.</i>
Yost, Francis Oliver,	<i>Boston.</i>

SUMMARY.

IN COURSES FOR GRADUATES, 1890-91 (to Dec. 1) . . . . .	19
FOURTH CLASS . . . . .	26
THIRD CLASS . . . . .	72
SECOND CLASS . . . . .	77
FIRST CLASS . . . . .	134
TOTAL . . . . .	<hr/> 328

# THE MEDICAL SCHOOL.

---

## REQUIREMENTS FOR ADMISSION.

All candidates for admission, except those who have passed an examination for admission to Harvard College, must present a degree in Letters, Science, or Medicine, from a recognized college or scientific school, or pass an examination in the following subjects:—

1. ENGLISH. Every candidate will be required to write, legibly and correctly, an original English composition of not less than two hundred words, and also to write English prose from dictation.

2. LATIN. The translation of easy Latin prose.

3. PHYSICS. A competent knowledge of Physics (such as may be obtained from Balfour Stewart's Elements of Physics).

4. ELECTIVE SUBJECT. Each candidate must pass an examination in any *one* of the following subjects: French, German, the Elements of Algebra or of Plane Geometry, Botany.

Whenever the candidate shall give evidence of having passed a satisfactory examination in any of the above requirements either at Harvard College or at the Lawrence Scientific School, a subsequent examination in such subject or subjects will not be demanded for his admission to the Medical School.

Candidates, who pass in two of the four subjects, will be admitted conditionally; but, until these conditions are made up, no student will be permitted to take part in any exercises of the third class, or present himself for examination in the subjects of that class.

The examinations will be held at the Medical School and conducted in writing; specimens of the papers used will be found in the Catalogue to be obtained of the Dean. In judging the work of the candidate, the spelling, grammar, and construction will be considered.

*The examinations for admission* are held on the Thursday following the last Wednesday in June, and on the Monday preceding the last Wednesday in September, beginning at 10 A.M.

In 1891 the *examinations for admission* will ALSO be held at the following places, beginning at 8 A.M. on Thursday, June 25:—

In *Quincy*, in rooms of the Adams Academy; in *Andover*, in rooms of the Phillips Academy; in *Groton*, in rooms of the Groton School; in *Exeter, N. H.*, in rooms of the Phillips Exeter Academy; in *Concord, N. H.*, in the rooms of St. Paul's School; in *New York*, in the lecture-

room of the Young Men's Christian Association, Twenty-third Street, corner of Fourth Avenue; in *Albany, N. Y.*, in the rooms of the Young Men's Christian Association; in *Philadelphia*, in the library-hall of the Academy of Natural Sciences, S. W. corner of Nineteenth and Race Streets; in *Cleveland*; in *Cincinnati*, in the rooms of the Law School, College Building, Walnut Street; in *Chicago*, in the rooms of the Chicago Manual Training School, corner of Michigan Avenue and Twelfth Street; in *St. Louis*, in the Central High School Building, corner of Olive and Fifteenth Streets; in *Denver*, in the rooms of the Denver High School (District No. 1), corner of Nineteenth and Stout Streets; in *San Francisco*, in rooms of the Boys' High School, on Sutter Street, between Gough and Octavia Streets; and in some convenient city in Europe, to be announced hereafter.

## DIVISION OF STUDIES.

### FOUR YEARS' COURSE.

*For the First Year.* — Anatomy, Physiology, General Chemistry,\* Medical Chemistry during the second half-year, and Materia Medica.

*For the Second Year.* — Practical and Topographical Anatomy, Medical Chemistry during the first half-year, Pathological Anatomy, Clinical Medicine, Surgery, Clinical Surgery, Therapeutics, and Diseases of Children.

*For the Third Year.* — Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery; and, as elective studies, Ophthalmology, Otology, Dermatology, Diseases of the Nervous System, Diseases of Children, Mental Diseases, Gynæcology, and Legal Medicine.

*For the Fourth Year.* — Ophthalmology, Otology, Dermatology, Laryngology, Mental Diseases, Diseases of the Nervous System, Gynæcology, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Legal Medicine, Orthopedic Surgery, Genito-urinary Diseases, Hygiene, Vaccination, Bacteriology, Ovarian Tumors, Clinical Microscopy, and the Preparation of Food for Infants and Invalids.

### THREE YEARS' COURSE.

*For the First Year.* — Anatomy, Physiology, General Chemistry,\* Medical Chemistry during the second half-year, and Materia Medica.

\* Any student who shall have previously passed in the Undergraduate department or Scientific School of Harvard University, or in the Summer Courses at Harvard College or the Medical School, an examination in General Chemistry (including qualitative analysis) will be exempt from examination in this branch, and may pursue the study of Medical Chemistry during his first year. The latter privilege will be granted to students from other colleges and scientific schools who have received instruction in general chemistry equivalent in character and amount to that of the first year, on passing a satisfactory examination at the September examination, provided that satisfactory evidence of such previous study be sent to the Dean of the Faculty one month before the date of this examination.

*For the Second Year.* — Practical and Topographical Anatomy, Medical Chemistry during the first half-year, Pathological Anatomy, Clinical Medicine, Clinical Surgery, Therapeutics, and Diseases of Children.

*For the Third Year.* — Obstetrics, Clinical and Operative Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Gynæcology, Diseases of Children, Legal Medicine, Bacteriology.

### METHODS OF INSTRUCTION.

The following methods of instruction are adopted in the several departments: —

*Anatomy.* — Lectures; various practical exercises, including abundant dissection, under the direction of the Demonstrator; recitations and demonstrations.

*Histology and Embryology.* — Lectures and laboratory work. Every student is recommended to purchase a microscope, but microscopes are provided for those whose means do not enable them to buy one. Accommodations are furnished for those students who wish to pursue special or advanced courses. Special facilities are offered for original investigators.

*Physiology.* — Lectures, recitations, conferences, and practical demonstrations in the Laboratory. To students of the second, third, and fourth classes, opportunities are given for original investigations in the Laboratory.

*Chemistry* is taught mainly by practical work in the Laboratory, the student having his own desk and apparatus. Descriptive Chemistry and qualitative analysis are taught during the first year. Besides the laboratory-work, there is a lecture and a recitation every week. In the second half of the first year and the first half of the second year Medical Chemistry is taught by lectures, recitations, and exercises in the Laboratory.

*Pathology and Pathological Anatomy* are taught by lectures, recitations, and practical instruction in pathological histology. During the past year a separate building for the instruction in this department has been erected at a cost of thirty-five thousand dollars, the gift of Dr. Henry F. Sears, a recent graduate of the School. The basement is fitted up for the care of animals and for the storage of material. The first story contains the bacteriological laboratories. On the second floor are the rooms for the officers of instruction and for special students in pathological anatomy and histology. In the third story is the class-room for recitations and demonstrations, and for instruction in pathological histology. An adjoining room is especially constructed for photography. These laboratories open directly into the physiological laboratory which, in turn, is



immediately connected with that for chemistry; all the appliances of each laboratory are thus available to the students in any one of them with the least possible loss of time. The collection of the Warren Anatomical Muscum is used to illustrate the lectures, and morbid specimens in a fresh state are shown at the recitations, where the student is called upon to describe the appearances. Students are also invited in turn to make an autopsy. The instruction in pathological histology, including the diagnosis of tumors, is continued throughout the year. Each student, provided with a microscope, the necessary instruments and reagents, prepares the various objects and submits them for explanation and criticism. The formation of small classes for special work and the individual pursuit of original investigations are encouraged.

The school possesses a large number of microscopes for the use of those students whose means will not permit the purchase of an instrument.

*Materia Medica.* — *Materia Medica* is taught by lectures and recitations with exhibition of medicines and pharmaceutical processes. Besides the large and complete cabinet of *materia medica* in the Muscum, a collection of officinal drugs and chemicals, and of all the important preparations is placed where it can be seen by the students at any time.

*Therapeutics* is taught by lectures and demonstrations supplemented by clinical exercises at the Hospital to sections of the class.

*The Theory and Practice of Medicine.* — Lectures, recitations, and hospital visits.

*Clinical Medicine.* — Daily instruction is given in this department by clinical lectures, hospital visits, and other exercises. Students are furnished with cases for personal examination, and are called upon to report them before the class, where they are criticised. These examinations are held both in the wards and in the amphitheatre. Another exercise, known as the clinical conference, affords an opportunity for more thorough preparation of cases, more time being allowed for their study. The full written report of a case is read by the student who has examined it. It is afterwards criticised by the class, by the Professor of Clinical Medicine, and other teachers in the School. In addition to this, a regular course of supplementary instruction is given in Auscultation and Percussion, and in Laryngoscopy, which affords students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration.

*Surgery.* — Lectures and recitations. There are also courses on Surgical Anatomy, Minor Surgery, Orthopedic Surgery, Surgical Histology, Bandaging, and Operative Surgery. In the last, students of the third and fourth classes are supplied with material for repeating the usual surgical operations.

*Clinical Surgery.* — Instruction in Clinical Surgery is given at the Massachusetts General Hospital and City Hospital, each week throughout the year, as follows: —

One clinical conference, one clinical lecture, two visits in the hospital wards, and two public operating days.

The surgical clinical conference is an exercise at which a student of the third class presents an elaborate and carefully prepared paper on a surgical case in the hospital wards, which has been assigned him. This paper he is obliged to read in the amphitheatre of the Hospital before the whole class, and defend it from their criticism. At the close of the exercise the Professor of Clinical Surgery gives a résumé of the case and his opinions upon it. The students of the second class attend these exercises preparatory to their active participation in them in their third year.

The clinical lecture is given either over surgical cases brought into the amphitheatre and illustrated by explorations or operations, or at the bedside in the wards illustrating the dressing of wounds, the treatment of fractures, and the progress of cases from entrance to discharge from the Hospital. Every candidate for a degree is required to report a case in clinical surgery.

*Obstetrics.* — Lectures and recitations. Students are required to take charge of least six cases of obstetrics. A course on operative obstetrics, with practical illustrations on the cadaver, is given during the second half-year.

*Diseases of Women.* — Lectures and practical instruction at the different dispensaries in the education of the touch. In these institutions every facility is given the student to become familiar with the different forms of uterine disease. A course in operative gynaecology extending throughout the year at the Free Hospital for Women is open to students of the third and fourth classes. To students of the fourth class cases are assigned for personal examination; these cases are reported in full at the clinical conference, and are made the subject of discussion by members of the class and the instructor. These students are also called upon to assist at the operations in the operative course. There is also a course in operative gynaecology upon the cadaver, at which each student of the fourth class is expected to perform the ordinary gynaecological operations with his own hands.

*Diseases of Children.* — The instruction in this subject consists of a systematic course of lectures beginning in the latter half of the second year and extending through the entire third year.

The second-year lectures comprise a careful study of infant-feeding and the development of the normal infant and child, and are intended to be preparatory to the study of the diseased conditions, which are taught in the third year.

The teaching in the third year consists of lectures and the direct examination of cases. The amount of material at the disposal of the students

in this department is very large, as it comprises the cases which are treated at the Boston Dispensary, Children's Hospital, and City Hospital. The special wards for Diphtheria and Scarlet Fever lately opened at the City Hospital offer unusual advantages for the study of these diseases, and are always at the disposal of Assistant Professor ROTCH for the benefit of the students. The instruction in the third year also includes eight clinical conferences and the visiting in their homes, in the Dispensary Districts, of such rare and interesting cases as are not usually seen in the hospitals.

At the end of the third year there are eight exercises devoted entirely to the review of the whole subject as taught in the second and third years, so that the student is not only prepared for his third-year examination, but also for entering upon the more extended clinical teaching of his fourth year. The intention of the teaching in the fourth year is to have the student see large numbers of cases, and to carefully follow them in their treatment from the beginning to the end of the disease.

*Ophthalmology.* — A complete course is delivered upon the diseases of the eye, including clinical instruction and the use of the ophthalmoscope.

*Dermatology* is taught by lectures and clinical illustrations. The special out-patient department at the Massachusetts General Hospital furnishes ample opportunities for illustration.

*Syphilis.* — Lectures and clinical instruction.

*Otology.* — Lectures and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary, and at the Boston City Hospital.

*Laryngology.* — Lectures and demonstrations.

*Diseases of the Nervous System.* — Lectures and demonstrations.

*Legal Medicine.* — Lectures, recitations, and demonstrations.

*Embryology and Histology.* — Lectures.

*Hygiene.* — Lectures and demonstrations.

*Bacteriology.* — Lectures and practical work in the laboratory.

### TEXT-BOOKS.

The following works are recommended as text-books, and for collateral reading and consultation: —

#### ANATOMY.

*Text-Books.* — Gray (11th edition). Quain (9th edition). Wilson. Holden's Landmarks. Dwight's Frozen sections of a Child. Treves' Applied Anatomy.

*Collateral Reading.* — Harrison Allen's Anatomy. Tillaux, Anatomie topographique. Dwight's Anatomy of the Head. Holden's Osteology. Humphrey's Human Skeleton. Morris, on the Joints. Weisse's Practical Human Anatomy.

## HISTOLOGY AND EMBRYOLOGY.

*Text-books.* — Stöhr's Lehrbuch der Histologie, or Stirling's Practical Histology.

*Collateral Reading.* — Foster and Balfour's Embryology. Schaeffer's Essentials of Histology. Klein's Histology. Whitman's Methods in Microscopic Anatomy. Carnoy's Biologie cellulaire.

## PHYSIOLOGY.

*Text-Books.* — Foster's Text-book of Physiology. Martin, The Human Body. Kirke's Handbook of Physiology. Yeo's Manual of Physiology.

*Collateral Reading.* — Fick, Compendium der Physiologie. Gamgee's Physiological Chemistry of the Animal Body. McGregor-Robertson's Elements of Physiological Physics. Landois' Manual of Human Physiology. Stirling's Practical Physiology.

## GENERAL CHEMISTRY.

*Text-Books.* — Witthaus' Medical Student's Manual of Chemistry.

*Collateral Reading.* — Miller's, Roscoe and Schorlemmer's, or Fownes' Chemistry. Douglass and Prescott's, or Fresenius' Qualitative Analysis.

## MEDICAL CHEMISTRY.

*Text-Books.* — Tyson, Practical Examination of Urine. Wharton and Stillé's Medical Jurisprudence, Vol. II., on Poisons, 4th edition.

*Collateral Reading.* — Ultzmann and Hoffmann's Atlas der Harnsedimente. Neubauer and Vogel, Analysis of the Urine. Hoppe-Seyler, Physiologische Chemie. Taylor on Poisons. Wormley's Micro-Chemistry of Poisons.

## MATERIA MEDICA.

*Text-Books.* — Mann's Prescription Writing. United States Dispensatory.

*Collateral Reading.* — H. C. Wood's Therapeutics. Bartholow's Therapeutics. Brunton's Pharmacology, Therapeutics, and Materia Medica. Edes' Materia Medica and Therapeutics.

## PATHOLOGY AND PATHOLOGICAL ANATOMY.

*Text-Books.* — Ziegler's Pathological Anatomy and Pathogenesis. Orth's Compend of Diagnosis in Pathological Anatomy.

*Collateral Reading.* — Friedlaender's Use of the Microscope in Clinical and Pathological Examinations. Coats' Manual of Pathology. Cohnheim's Lectures on General Pathology.

## THERAPEUTICS.

*Text-Books.* — H. C. Wood's Therapeutics. Edes' Materia Medica and Therapeutics.

*Collateral Reading.* — Brunton's Pharmacology, Therapeutics and Materia Medica. Ringer's Therapeutics.

## OBSTETRICS.

*Text-Books.* — Lusk's Manual of Midwifery.

*Collateral Reading.* — Schroeder's Manual of Midwifery. Cazeaux's Midwifery. Winckel's Diseases of Childbed. Schauta's Grundriss der operativen Geburtshilfe. Kucher's Puerperal Convalescence.

## THEORY AND PRACTICE.

*Text-Books.* — Strümpell's Text-Book of Medicine.

*Collateral Reading.* — Pepper's System of Practical Medicine by American authors. Flint's Practice of Medicine. Cutler and Garland's Percussion Outlines.

## CLINICAL MEDICINE.

*Text Books.* — Strümpell's Text-Book of Medicine. Flint's Practice of Medicine. DaCosta's Medical Diagnosis. Flint's Manual of Percussion and Auscultation.

*Collateral Reading.* — Pepper's System of Practical Medicine by American Authors. Fagge's Practice of Medicine. Gowers' Diseases of the Nervous System. Cutler and Garland's Percussion Outlines.

## SURGERY.

Bryant's Practice of Surgery. Billroth's Surgical Pathology. Smith's Operative Surgery.

Holmes's System of Surgery. The International Encyclopedia of Surgery. Van Buren and Keyes's Genito-urinary Organs and Syphilis. Guérin, *Éléments de Chirurgie Opératoire*.

## GYNAECOLOGY.

*Text-Books.* — Thomas, on the Diseases of Women. Fifth Edition.

*Collateral Reading.* — Emmet's Principles and Practice of Gynaecology. Klob's Pathological Anatomy of the Female Sexual Organs. Savage, The Surgery, Surgical Pathology, and Surgical Anatomy of the Female Pelvic Organs. Davenport, on the Diseases of Women.

## OPHTHALMOLOGY.

*Text-Books.* — Williams, Berry and Noyes, Nettleship, Zehender. Loring, on the Ophthalmoscope. Landolt, on Refraction and Accommodation.

## OTOLOGY.

*Text-Books.* — Barr, Roosa, Burnett.

*Collateral Reading.* — Politzer, Diseases of the Ear. Schwartze, Chirurgische Krankheiten des Ohres.

## DERMATOLOGY.

*Collateral Reading.* — Duhring, Hyde, Robinson, Crocker, Kaposi, Behrend, v. Ziemssen.

## LEGAL MEDICINE.

*Text-Books.* — Taylor's Manual of Medical Jurisprudence.

*Collateral Reading.* — Ogston, Reese, Hofmann, Woodman and Tidy.

## INSTRUCTION FOR 1890-91 TO STUDENTS OF THE THREE YEARS' COURSE.

**Anatomy.**

Descriptive Anatomy. *Four times a week.* Professor DWIGHT.

Practical Anatomy, with Exercises in Dissection. *Eight hours daily from October 15th till May.* Demonstrations and Recitations. Drs. MIXTER, CONANT, and MUNRO.

Topographical and Advanced Anatomy. *Once a week.* Professor DWIGHT. Topographical and Applied Anatomy. *Three times a week from November till May.* Assistant Professor M. H. RICHARDSON.

**Histology and Embryology.**

Laboratory Exercises in Histology. *Three times a week during first half-year. Twice a week during second half-year.* Assistant Professor C. S. MINOT, and Dr. QUINCY.

Histology. — Lectures. *Once a week during the first half-year.* Assistant Professor C. S. MINOT. Embryology. *Eight lectures during the second half-year.* Assistant Professor C. S. MINOT.

**Physiology.**

Systematic and Experimental Physiology. *Four times a week.* Professor BOWDITCH.

Laboratory Exercises in Experimental Physiology. *Twice a week.* Dr. J. W. WARREN.

**Chemistry.**

Descriptive and Analytical Chemistry. *Twice a week, with an additional weekly exercise during the first ten weeks.* Professor HILLS.

Medical and Toxicological Chemistry. *Twice a week.* Professor WOOD. Practical Exercises in the Laboratory in Analytical and Medical Chemistry. *Daily.* Professors WOOD and HILLS, and Drs. EMERSON, HARRINGTON, and WORCESTER.

**Materia Medica and Therapeutics.**

Materia Medica, with the Exhibition of Drugs. *Twice a week during the second half-year.* Dr. HARRINGTON.

Therapeutics, with Demonstrations. *Three hours a week during the first half-year.* Clinical Therapeutics. *Three hours a week to sections of the class during the second half-year.* Assistant Professor F. H. WILLIAMS.

**Hygiene.**

Lectures and Demonstrations. *Once a week during the second half-year.* Dr. HARRINGTON.

**Pathology and Pathological Anatomy.**

General Pathology and Pathological Anatomy. *Twice a week.* Professor FITZ.

Special Pathological Anatomy, with Demonstrations. *Twice a week.* Professor FITZ.

Laboratory Exercises in Pathological Histology. *Twice a week.* Drs. WHITNEY and GANNETT.

Practical Instruction in Performing Autopsies. *Throughout the year.* Professor FITZ and Dr. GANNETT.

**Surgery.**

Surgery. *Once a week for three months; twice a week for five months.* Professor CHEEVER.

Surgery and Surgical Pathology. *Twice a week till January.* Professor J. C. WARREN.

Application of Bandages and Apparatus. *Laboratory exercises to the class in sections during first half-year.* Dr. BURRELL.

**Clinical Surgery.**

Lectures. *Once a week till January.* Professor CHEEVER. *Once a week from October till March.* Professor PORTER. *Once a week from March till June.* Professor J. C. WARREN.

**CLINICAL SURGERY. — THIRD CLASS.**

Clinical Surgery Conference. *Once a week, from October till May.* Professor PORTER.

Clinical visits, *in sections of half the class, once a week throughout the year,* at the Massachusetts General Hospital, by Professors PORTER and J. C. WARREN, Assistant Professor M. H. RICHARDSON, and Drs. BEACH, HOMANS, and CABOT. — At the Boston City Hospital, by Professor CHEEVER and Drs. GAY, BOLLES, BRADFORD, POST, and GAVIN.

## CLINICAL SURGERY. — SECOND CLASS.

*In small sections daily in the Out Patient Departments of the Massachusetts General Hospital, by Drs. J. W. ELLIOT and F. B. HARRINGTON. — At Boston City Hospital, by Drs. G. H. MONKS, H. L. BURRELL, F. S. WATSON.*

Clinical visits, *in sections of half the class, once a week throughout the year, at the Massachusetts General Hospital and Boston City Hospital.*

## OPERATIVE SURGERY.

Operations are performed before the students one day each week throughout the year in the Amphitheatres at the Massachusetts General Hospital and Boston City Hospital.

Operative Surgery and Surgical Anatomy. *Exercises illustrated upon the cadaver twice a week in March and April.* Professor PORTER.

Operative Surgery, *Fifteen practical exercises by the students of the Third Class, under the direction of Professor PORTER, assisted by Drs. MIXTER, CONANT, MONKS, ELLIOT, HARRINGTON, BURRELL, WATSON, and SCUDDER.*

The Surgical Cases at the Eye and Ear Infirmary and at the Boston Dispensary are shown by the surgeons in charge.

## Ophthalmology.

Diseases of the Eye. *Twice a week during the first half-year.* Professor H. W. WILLIAMS.

Clinical Ophthalmology. *Once a week till January, and after March.* Professor H. W. WILLIAMS.

## Dermatology.

Diseases of the Skin. *Once a week.* Professor WHITE.

Clinical Dermatology. *Once a week.* Professor WHITE.

## Syphilis.

Practical Diagnosis and Treatment of Syphilis. *Once a week for a half-year.* Dr. POST.

## Otology.

Otology. *Twice a week, October, November, and December.* Professor BLAKE.

Clinical Otology. *Once a week in January, February, and March.* Professors BLAKE and GREEN.

## Theory and Practice of Physic.

Lectures. *Twice a week.* Professor F. MINOT. Recitations. *Twice a week.* Dr. CUTLER.



### Clinical Medicine.

*Four times a week.* Professor SHATTUCK, and Dr. VICKERY. *Twice a week.* Assistant Professor MASON.

Clinical Conference. *Once a week.* Professor SHATTUCK, Assistant Professor MASON, and Drs. GARLAND, and VICKERY.

Practical Instruction in Auscultation and Percussion. *Six times a week during the first half-year.* Drs. GARLAND, GANNETT, and WITHINGTON.

Practical Diagnosis and Treatment of Diseases of the Nervous System. *Once a week.* Dr. PUTNAM. *Once a week.* Dr. WALTON.

Mental Diseases. *Once a week.* Dr. FISHER.

Medical visits are made at the Massachusetts General Hospital by Professors FITZ, W. L. RICHARDSON, and SHATTUCK, and Dr. CUTLER. — At the City Hospital, by Assistant Professors ROTCH and MASON, and Drs. J. G. BLAKE, DOE, and FORSTER. — At the Danvers, South Boston, and Somerville Asylums for the Insane. — The Medical Cases at the Boston Dispensary are shown by the physicians in charge.

### Laryngoscopy and Rhinoscopy.

Practical Diagnosis and Treatment. *Six times a week, first half-year.* Professor KNIGHT and Dr. HOOPER.

### Diseases of Children.

Practical Diagnosis and Treatment. *Twice a week.* Assistant Professor ROTCH.

Paediatrics. *Once a week, March and April.* Assistant Professor ROTCH.

Clinical Conference. *Once a week.* Assistant Professor ROTCH and Drs. BUCKINGHAM and SHERMAN.

### Legal Medicine.

*Twice a week during the first half-year.* Professor DRAPER.

### Obstetrics.

Theory and Practice of Obstetrics. *Twice a week.* Professor WM. L. RICHARDSON. Recitations. *Once a week.* Dr. C. M. GREEN.

Operative Obstetrics. *Twelve practical exercises.* Dr. C. M. GREEN.

Practical Instruction in Clinical Obstetrics. *Throughout the year.* Drs. C. M. GREEN, REYNOLDS and TOWNSEND.

Obstetrical Conference. *Once a week after January 1st.* Professor WM. L. RICHARDSON and Drs. C. M. GREEN, REYNOLDS, and TOWNSEND.

**Gynaecology.**

*Twice a week.* Professor BAKER. Two clinics each week during the second half-year. Professor BAKER. Two clinics each week during the first half-year. Dr. DAVENPORT.

**Bacteriology.**

*Six lectures in first half-year.* Dr. ERNST.

Practical Laboratory Work. *Four afternoons a week for eight weeks.* Dr. ERNST.

**INSTRUCTION FOR 1890-91 TO STUDENTS OF THE FOURTH YEAR.****Clinical Medicine.**

*Once a week for one month.* Professor FITZ. *Once a week for six months.* Dr. GARLAND. *Once a week for seven months.* Dr. GANNETT. *Once a week for three months.* Dr. VICKERY.

**Diseases of Children.**

*Twice a week at Children's Hospital for three months and especial clinical exercises.* Assistant Professor ROTCH.

**Diseases of the Nervous System.**

*Once a week for four months.* Dr. WALTON. *Once a week for four months.* Dr. KNAPP.

**Mental Diseases.**

*Twice a week for four months.* Dr. FISHER. *Once a week for three months.* Dr. COWLES.

**Surgery.**

Clinical Surgery. *Twice a week for two months.* Dr. GAY. *Twice a week for three months.* Dr. BURRELL.

Operative Surgery. *Practical Exercises.* Professor PORTER, Assistant Professor M. H. RICHARDSON, and Drs. MIXTER and MONKS.

Orthopedic Surgery. *Twice a week for two months.* Dr. BRADFORD.

**Ovarian Tumors.**

*Once a week for two months.* Dr. HOMANS.

**Obstetrics.**

Clinical Obstetrics. *Twice a week for four months.* Professor WM. L. RICHARDSON.

Operative Obstetrics. *Practical Exercises.* Dr. C. M. GREEN.

**Gynaecology.**

*Twice a week for eight months.* PROFESSOR BAKER. *Twice a week for three months.* DR. DAVENPORT. *Twice a week for eight months.* DR. STRONG. *Once a week for four months.* DR. DOE.

Operative Gynaecology. *Practical Exercises.* PROFESSOR BAKER.

**Dermatology.**

*Twice a week for eight months.* PROFESSOR WHITE. *Twice a week for three months.* DR. TILDEN.

**Syphilis.**

*Twice a week for four months.* DR. GREENOUGH.

**Ophthalmology.**

*Twice a week for three months.* PROFESSOR H. W. WILLIAMS. *Twice a week for four months.* DR. WADSWORTH.

**Otology.**

*Three times a week for eight months.* PROFESSORS C. J. BLAKE and J. O. GREEN.

**Laryngology.**

*Three times a week for three months.* PROFESSOR KNIGHT.

**Diseases of the Genito-Urinary Apparatus.**

*Once a week for four months.* DR. CABOT. *Once a week for three months.* DR. WATSON.

**Legal Medicine.**

*Twice a week during the first half-year.* PROFESSOR DRAPER. *Demonstrations.* DR. HARRIS.

**Hygiene.**

*Twice a week for two months.* DR. DURGIN.

**Pathological Anatomy.**

*Once a week for six months.* DR. WHITNEY.

**Bacteriology.**

*Once a week for four months.* DR. ERNST.

**Cookery.**

*Twice a week (two hours) for one month.* BOSTON COOKING SCHOOL.

## CLINICAL ADVANTAGES.

The Medical Department of the University is established in Boston, in order to secure those advantages for Clinical Instruction and for the study of Practical Anatomy which are found only in large cities.

There are Hospital visits or operations daily.

*The Massachusetts General Hospital.* — During the past year, 3,624 patients were treated in the wards, and 22,939 in the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, on four days in the week. Operations are numerous, and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, and Ophthalmology.

*The City Hospital.* — During the past year, 6,502 cases were treated in its wards, and 13,605 in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, 800 street accidents are yearly treated. Surgical operations are performed in the amphitheatre. Diseases of the eye, the ear, and the skin are largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons twice a week.

In these two hospitals, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching nearly two thousand a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

*The Boston Lying-in Hospital.* — More than five hundred patients are annually confined in the Hospital. In the out-patient department, attendance during confinement is also furnished to several hundred women at their homes.

*The Boston Dispensary.* — 60,621 patients were treated at this Public Charity during the past year. A new building has lately been erected at a cost of \$50,000, where students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of medicine and surgery.

*The Massachusetts Charitable Eye and Ear Infirmary.* — The thirteen thousand patients annually treated at this institution present every variety of disease of the ear and eye, and supply a large number of operations.

*The Marine Hospital at Chelsea* receives from the shipping of the port a large number of patients, who furnish examples of the diseases of foreign countries and of distant parts of the United States. Many cases of venereal disease, in its various forms, are treated annually.

*The Free Hospital for Women.* — In the wards of this institution, which is devoted exclusively to the diseases peculiar to women, abundant opportunity is offered to study the severer forms of uterine disease, and to witness operations which are performed once a week throughout the year. In the out-patient department, where about 3000 patients are annually treated, every advantage is given the student to observe the less serious forms of disease and witness a large amount of minor gynaecological surgery.

Students are also permitted to visit the Children's Hospital and the Carney Hospital on application to the physicians on duty.

There are twenty-five appointments annually for Internes in the various hospitals, and as many more for Assistants in the out-patient departments. Appointments for the Massachusetts General and City Hospitals are for the term of eighteen months, for the Boston Lying-in Hospital for four months, and for the Free Hospital for Women for nine months.

### EXAMINATIONS.

The regular examinations are conducted in writing and orally, and are held at the end of each year in June, and a week before the opening of the School in September (with a few exceptions), on the studies of the preceding year.\* They are held in the following order:—

*At the End of the First Year.* — Anatomy, Physiology, General Chemistry, † *Materia Medica*.

*End of Second Year.* — Anatomy, Medical Chemistry, ‡ Pathology and Pathological Anatomy, Therapeutics.

*End of Third Year.* — Obstetrics, § Theory and Practice of Medicine, Clinical Medicine, Surgery, § Clinical Surgery; and, in addition, each candidate will be required to take examinations, amounting to two (2) hours, and chosen from the following list of elective studies, at the commencement of the year; the choice thus made is to be final. One two-hour course or two one-hour courses are to be taken, as follows:—

Ophthalmology ‡ (1 hr.), Otology (1 hr.), Dermatology (2 hrs.), Diseases of Nervous System (2 hrs.), Diseases of Children (2 hrs.), Mental

\* The June examination is for those only who are members of the School at the time, and for those entitled to apply for the degree.

† See foot-note on page 279.

‡ The examinations in these subjects will be held at the end of the first half-year.

§ The examinations in Obstetrics and Surgery may be passed at the end of the fourth year if preferred.

Diseases (1 hr.), Gynaecology (2 hrs.), Legal Medicine\* (1 hr.), Bacteriology (1 hr.).

*End of Fourth Year.* — Each candidate must pass examinations amounting to ten (10) hours, chosen from the following list of studies, the choice to be made at the commencement of the year and to be regarded as final: —

Ophthalmology\* (2 hrs.), Dermatology (2 hrs.), Otology (2 hrs.), Laryngology (1 hr.), Gynaecology (2 hrs.), Diseases of Children\* (2 hrs.), Diseases of Nervous System (2 hrs.), Mental Diseases (1 hr.), Clinical Obstetrics (2 hrs.), Operative Obstetrics (1 hr.), Operative Surgery (1 hr.), Legal Medicine\* (1 hr.), Hygiene (1 hr.), Bacteriology (1 hr.).

In addition to the above examinations each student is required to present a satisfactory report of the analysis of a solution containing inorganic substances, and of a specimen of urine, to examine and report upon a clinical case in Medicine and Surgery, and to take charge of and report upon six cases in Obstetrics; each student must also have dissected the three parts of the body to the satisfaction of the Demonstrator, and no student shall be admitted to the examination on Anatomy at the end of the first year who has not so dissected two parts, nor to that at the end of the second year who has not so dissected three parts, unless excused by the Professor of Anatomy.

The above courses are entirely distinct from third-year courses of the same title; and in addition there will be given clinical and laboratory courses in Orthopaedic Surgery, Genito-urinary Diseases, Syphilis, Ovarian Tumors, Clinical Microscopy, Preparation of Food for Infants and Invalids; in these courses no examination is required.

House-officers in the Massachusetts General Hospital, Boston City Hospital, Carney Hospital, McLean Asylum, Boston Lunatic Hospital, Massachusetts Charitable Eye and Ear Infirmary, Boston Children's Hospital, Cambridge Hospital, and Free Hospital for Women may obtain the fourth-year degree by entering the fourth class, passing an examination in the electives amounting to five (5) hours, and presenting a certificate of satisfactory performance of duty in the Hospital for a period equivalent to the School year, and an acceptable thesis or clinical report based upon observations made during their service. On account of the shorter services in the Lying-In Hospital and Adams Nervine Asylum internes of these institutions will be required to pass an aggregate of seven (7) hours examination and present a certificate and thesis as above.

Medical students who desire to devote their fourth year of study mainly to advanced work in any of the laboratories of the School may obtain the fourth-year degree upon passing examinations in the elective studies

\* The examination in these subjects will be held at the end of the first half-year.

aggregating five (5) hours, and presenting an acceptable thesis based on the laboratory work actually done.

Students attending the four years' course may be examined at the end of the third or fourth year, as preferred, in Clinical Medicine, Clinical Surgery, and Obstetrics. The examinations of the first two years are common to both groups of students. The final examinations at the close of the three years' course are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Theory and Practice, and Clinical Medicine, with electives as described on the previous page.

No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty. Those who fail in any subject may again present themselves in that subject at the next regular examination.

*All students are required to notify the Secretary in writing of their intention to present themselves for examination, either in June or September, one month before such examination is to be held.*

The regular examinations for the year 1890-91 will begin June 2 and September 28.

#### DIVISION OF STUDENTS.

Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students following the three years' course are classified as heretofore, and the instruction in the special branches is of the same character as that which has been given for several years. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission, and furnish (from a recognized Medical School) a satisfactory certificate of time spent in medical studies. No student may advance with his class, or be admitted to advanced standing, until he has passed the required examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed all the examinations of the first, in addition to a majority of those of the second year, or of the fourth class, until he has passed all of the examinations of the first and second, in addition to a majority of those of the third year.

*In order that the time of study shall count as a full year, students of all classes must present themselves within the first week of the School year and register their names with the Secretary.*

Students who do not intend to offer themselves for a degree will, however, be received for any portion of the course.

Any student may obtain a certificate of his period of connection with the School.

## LIBRARIES.

The students have access, free of charge, to the books belonging to the library of the School and to the libraries of the several departments.

The College Library at Cambridge is open to the students of the Medical School.

The Boston Public Library, which contains a large collection of medical books, is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Treasurer's office, or deposited with the Treasurer the sum of fifty dollars, may also use this library.

## REQUIREMENTS FOR THE DEGREE.

Every candidate must be twenty-one years of age, and of good moral character; must give evidence of having studied medicine three or four full years; have spent at least one continuous year at this School; and have passed the required examinations.

The course of study recommended by the Faculty covers four years; but, until further notice, the Degree of Doctor of Medicine will be given as heretofore, upon the completion of three years of study, to applicants who have passed satisfactorily the above requirements.

The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of seventy-five per cent \* upon all the examinations above stated. A certificate of attendance on the studies of the fourth year will be given to such graduates as have attended the course, and have passed a satisfactory examination in the studies of the same.

The presentation of a thesis is not a requirement for graduation, but candidates for the degree of M.D. may present a voluntary thesis. If of conspicuous merit, it will receive honorable mention; if also of a suitable character, it may be read at the University Commencement exercises. Theses must be completed and delivered to the Dean on or before the first day of June.

The degree of Master of Arts is open to graduates of the School who are also Bachelors of Arts of Harvard College, and to Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Harvard College. Candidates must pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine. Students who have taken the four years' course, and have passed the examinations "with high credit," may obtain the degree of Master of Arts by presenting their applications to the Faculty on or before the first of June in the year of their final examinations.

\* In computing averages all examinations will be reduced to a basis of three hours.



### ANATOMICAL PRIZE.

Professor C. B. PORTER offers a prize of fifty dollars, open to all students, and graduates of not more than five years' standing, except teachers of anatomy, for the best dissection deserving the award illustrative of surgical anatomy, the specimen to be presented to the Museum.

### OTOLOGY PRIZE.

For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, in alternate years, the sum of twenty-five dollars, open to third-year students.

The prize for 1888-89 for the best preparation was awarded to George Warton Kaan.

### PECUNIARY AID.

Four yearly scholarships, of the value of \$200 each, have been established by the Faculty, and are open to meritorious students who have been at the School for at least one year. The two Barringer scholarships, of the value of \$300 and \$200 respectively, will be awarded to deserving students, preferably those of the fourth class. The David Williams Cheever scholarship, of the value of \$200, will be awarded to a student of the first year. Only those needing assistance are expected to apply; and of such, those holding the highest rank will have the preference. Holders of scholarships may be required to render assistance in laboratory courses to an amount not exceeding four hours per week.

The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is payable every other year to one or more meritorious students needing assistance.

### FEES AND EXPENSES.

For matriculation, five dollars; for a year, two hundred dollars, (if in two payments, at the first, one hundred and twenty dollars; at the second, eighty dollars); for a half-year alone, one hundred and twenty dollars; for graduation, thirty dollars. During the first two years there are the following additional expenses: Two dollars for each of the three parts required for dissection; and four dollars per year for chemical material, in addition to the charge for breakage of glass apparatus. Of students who do not pay in advance, a bond for \$300, executed by two sufficient bondsmen, one of whom must be a citizen of the United States, is required. A copy of such bond will be sent, on application to the Secretary of the Faculty, and all students are recommended to deposit such a bond. To students depositing bonds, term-bills will be presented one week before the end of the first term, to be paid within two weeks; and also one week or more before Commencement, to be paid on

or before the beginning of the next academic year. Such students will be held responsible for the payment of fees until they have notified the Dean of their intention to withdraw from the School, and have subsequently received their bond from the Treasurer.\* Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Faculty, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction—this remission to date from the reception by the Dean of a written notice of the student's withdrawal from the School. No degree can be conferred till all dues to the School are discharged. The student's general expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. The janitor of the Medical School will always have a list of boarding-houses in the vicinity of the School building, varying in their rates of charges from five to ten dollars a week.

*Fourth-Year Fees.*—The fee for the full year to all students who have paid for three full courses in the School, and who are entitled to be classified in the Catalogue as fourth-year students, shall be one hundred dollars. For other students, including graduates of other schools, the fee shall be two hundred dollars. For Internes in Hospitals, who are entitled to apply for the degree, the fee shall be thirty dollars for the entire year. For students engaged in special advanced work in the laboratories the fee shall be one hundred dollars.

### COURSES OF STUDY FOR GRADUATES.

The Faculty has arranged a greatly enlarged and improved plan of instruction for graduates, embracing all the branches of practical and scientific medicine. It is designed to supply those opportunities for clinical and laboratory study which have hitherto been sought in Europe by young graduates and practitioners.

The new and extensive laboratories of the School are inferior to none in America, and the clinical advantages afforded by the hospitals of Boston furnish abundant material for all purposes of instruction. The following are the principal institutions:—

Massachusetts General Hospital,	Boston Lying-in Hospital,
Boston City Hospital,	The Children's Hospital,
Boston Dispensary,	McLean Asylum for the Insane,
Massachusetts Eye and Ear Infirmary,	Boston Lunatic Hospital,
Free Hospital for Women,	The Carney Hospital.

\* The Treasurer's office is at 50 State St., Boston.

Instructors in the Medical School are members of the medical and surgical staffs of these institutions, and students are admitted to all of them under their immediate supervision.

Instruction in the graduate courses is entirely distinct from that of the undergraduate department of the School; but students of the former will be admitted also to all the regular lectures (not clinical) of the latter without extra charge during their connection with the School.

Instruction will be conducted in small classes and under the personal direction of the heads of departments. The courses will be mostly of eight weeks' duration, and the practitioner will be able during a brief residence to take one or several of them. Those desiring to study a specialty may pursue long, continuous courses in any single branch at reduced rates.

Instruction will be given throughout the academic year, October to June. A certificate of attendance will be furnished when desired.

#### FEEES.

The fees for the separate courses in the several departments vary with the courses.

Fee for two months' attendance upon all the courses,	\$100.
“ “ four months' “ “ “ “	150.
“ “ attendance throughout the academic year “ “ “	200.

An extra fee is required for the use of material in laboratory, dissecting and operative courses. Matriculation, \$5.

All fees are payable in advance to the Treasurer of the University, 50 State Street.

#### LIST OF COURSES.

*Anatomy.* — The following courses are offered: —

1. The Anatomy of the Joints, illustrated by preparations, frozen sections, and the live model.
2. The Anatomy of the Central Nervous System, including Cerebral Localization and the Course of Fibres. Illustrated by preparations, models, plates, and diagrams.
3. Applied Anatomy demonstrated on the cadaver, including Surface Anatomy.
4. A Dissection Course.

*Histology and Embryology.* — The following courses are offered: —

1. A course on Human Embryology.
2. Normal Histology.
3. Histological Technique.

*Physiology.* — Opportunities for carrying on original investigations in the Physiological Laboratory, which is well provided with apparatus for original research, including recording instruments of various sorts, induction coils, interrupters, galvanometers, constant temperature apparatus, photographic outfit, artificial respiration apparatus, etc.

*Medical Chemistry.* — Practical instruction in the Chemical Laboratory, in physiological chemistry, in the analysis of the urine and other animal fluids in health and disease, and of poisons; examination of blood-stains and other objects connected with medico-legal investigations, with the application of the microscope to these processes. Instruction in General Analysis will also be given if desired.

*Pathological Anatomy.* — The courses in Pathological Anatomy will consist of —

- (1) Demonstrations of Morbid Material, and Practice in the Method of Post-mortem Examinations.
- (2) Exercises in Pathological Histology.
- (3) Instruction in Clinical Microscopy.
- (4) Laboratory Opportunities for Special Investigations.

Each course will last eight weeks, and instruction will be continuous throughout the academic year from October to June.

*Clinical Medicine.* — Instruction in Clinical Medicine will consist of two courses of eight exercises, which will be fully illustrated by cases in the wards of the Massachusetts General and Boston City Hospitals, two courses on Diseases of the Digestive Organs, and two on Physical Diagnosis.

*Surgery.* — A course in Clinical Surgery at the Boston City Hospital in October and November at 10 o'clock on Mondays. Eight exercises.

Also a course in Clinical Surgery at the Massachusetts General Hospital in November and December; and a second course in January and February.

A course in Clinical Surgery at the Massachusetts General Hospital in October, at 12 o'clock daily, except Saturdays. Twenty exercises.

Two courses on Minor Surgery, including fractures and dislocations, at the Boston City Hospital from December till April.

Clinical Surgery, including Minor Surgery, at the Carney Hospital in October and November, at 11 o'clock on Tuesdays, Thursdays, and Saturdays.

Two courses on Clinical Surgery (including Orthopedic) at the Children's Hospital from December till March.

Courses in Bandaging and Apparatus, of seven exercises, of two hours each.

A course of twelve exercises in Orthopaedic Surgery at the Childrens Hospital.

*Obstetrics.* — Clinical instruction in Obstetrics will be given in the wards of the Boston Lying-in Hospital on two mornings of the week during the months of November and December, and April and May. Special attention will be given to the management of convalescence after confinement, and opportunity will be given to witness labor cases and operations in the Hospital.

An abundance of out-patient cases of Obstetrics will be furnished.

Practical instruction in Operative Obstetrics on the cadaver will be given at the Medical School, consisting of ten daily exercises.

*Ophthalmology.* — At the Boston City Hospital two courses will be given, from January till July, consisting of clinical instruction, practical exercises in diagnosis and treatment, opportunities for witnessing operations and demonstrations of the use of the ophthalmoscope and other means for determining the healthy or pathological conditions of the deep-seated structures and the transparent media of the eye, and the selection of appliances for the relief of optical defects.

Courses will also be given at the Massachusetts Charitable Eye and Ear Infirmary, the ophthalmic out-patient department of which receives between nine and ten thousand patients annually. The cataract extractions during the past year numbered 125, and the number of other operations is exceeded at no other institution of its kind in this country.

*Dermatology.* — Instruction in Diseases of the Skin will be given at the Skin Department of the Massachusetts General Hospital. Over two thousand cases are treated at this clinic yearly, which come from the New England States generally and the British provinces, and present many examples of the rare forms of cutaneous affections.

Each course will last eight weeks, and instruction will be continuous throughout the academic year, from October to June inclusive. Graduates will have opportunity for the closest examination of patients. They may also attend the systematic course of lectures on Dermatology. A large collection of Baretta's models of skin disease is open to their inspection in the Museum of the School.

*Syphilis.* — A course on Syphilis at the Out-Patient Department of the Boston City Hospital in January, February, and March.

*Otology.* — The instruction in this department will be given at the Massachusetts Charitable Eye and Ear Infirmary and at the Boston City Hospital. Each course of eight weeks' duration will include, in addition to the exhibition and explanation of cases, practical instruction in examination and diagnosis, and a systematic review of the anatomy, physiology and diseases of the ear.

The Infirmary, 176 Charles Street, offers unusual facilities for the study of ear diseases in its very large clinic, more than three thousand

aural cases being treated annually. - It is fully provided with receiving, operating, and lecture rooms, severe cases and those requiring serious operations being provided with beds in the house and skilled nursing.

At the City Hospital, Harrison Avenue, many of the most important operations on the ear are performed, and in addition its general and contagious wards of more than four hundred beds afford unusual opportunities for studying the aural complications of general diseases, more especially of the exanthemata, as large numbers of cases of typhoid fever, diphtheria, scarlet fever, and measles are received here every year. The courses will consist of twenty-four exercises of one hour or more each.

*Gynaecology.* — Instruction in Diseases of Women will be given at the Free Hospital for Women and the Boston Dispensary. The wards of the first-named Hospital afford opportunities for the study of the severer forms of uterine disease, while the Out-Patient Department of both institutions supplies abundant material for the education of the touch, and the diagnosis and treatment of all minor gynaecological diseases. There will be four courses of eight weeks each.

Graduates may also attend the course of lectures at the Medical School.

Provided six or more graduates desire an operative course, in which they may take part in the performance of the various gynaecological operations upon the cadaver, as well as acquire greater familiarity with the instruments used in minor Gynaecology, such instruction will be given from 7 till 9 P.M. each evening during the last two weeks of each of the previous courses.

*Ovarian Tumors.* — In this department cases for diagnosis will be shown, and both recent and preserved specimens illustrative of different forms of abdominal tumors will be exhibited. Graduates may also have opportunities to witness laparotomies and to receive clinical teaching on the individual case then under treatment. They will also be admitted to lectures at the Medical School.

*Laryngology and Rhinology.* — Instruction in Diseases of the Throat and Nose will be given in two courses from January to April. Each course will last six weeks.

Each course will consist of a demonstration of the structure of the larynx and nasal passages, and practical instruction in the use of the laryngoscope and rhinoscope, and in the diagnosis and treatment of affections of the throat and nose. Both Hospitals afford excellent material.

*Neurology.* — Courses of twenty-four lectures each will be given on Diseases of the Nervous System, at the Out-Patient Department of the Massachusetts General Hospital. The material afforded by this clinic, which receives patients from all over New England, is ample; the Depart-

ment is well provided with means for the investigation of cases; the courses will be abundantly illustrated by diagrams and microscopic preparations as well as by the exhibition of patients, and will include instruction in the use of electricity in diagnosis and treatment.

*Mental Diseases.* — Instruction in Mental Diseases will be given at the McLean Asylum for the Insane during February and March. The daily average number of patients is 169.

Also at the Boston Lunatic Hospital during the months of April and May. The Hospital contains 200 patients.

*Diseases of Children.* — Instruction in Diseases of Children will be given at the City Hospital, Children's Hospital, Infant Hospital and West End Nursery, Boston Dispensary (Children's Room), and in the Dispensary Districts, throughout the year.

The material which can be made use of in this course is very large in amount, comprising not only the more common forms of disease met with by the physician in his every-day practice, but also the rare forms.

The new wards at the City Hospital, built especially for the reception of cases of scarlet fever and diphtheria, offer exceptional advantages for studying the diagnosis and treatment of these diseases.

*Legal Medicine.* — Instruction in Legal Medicine will be given at the City Hospital. Each course will last eight weeks, and instruction will be continuous throughout the academic year from October to June.

*Hygiene.* — Practical instruction will be given in the Laboratory at the Medical School in the analysis of air, water, soils, and of articles of food and drink for adulterations. Opportunities will also be afforded for special work. Attention will also be given to the sanitary inspection of houses, public buildings, and premises of offensive trades, and to the investigation of ventilation, plumbing, etc.

*Bacteriology.* — The courses in Bacteriology will consist of instruction in the methods of research, together with opportunities for original investigation. The means of illustration and facilities for work are those of a well-equipped laboratory.

Those pursuing these courses may elect the studies to which they will give their attention, and allot the time they will devote to each. They will be exempt, unless at their option, from examinations, and may obtain a certificate of attendance on the courses pursued. On payment of the full fee for the year, they will have the privilege of attending any of the other exercises of the Medical School, the use of its laboratories and library, and all other rights accorded by the University.

Graduates of other medical schools may obtain the degree of M.D. at this University, after a year's study in the graduates' course. The required

examinations are those of the three years' course, and may be passed in such order as is desired, but only at the stated seasons.

For further information and full description of the courses, address Dr. H. P. BOWDITCH, *Dean*, Harvard Medical School, Boylston Street, Boston, Mass.

### SUMMER COURSES.

During the summer of 1891 courses in many branches of practical and scientific medicine will be given by some of the teachers of the School. These courses will be clinical in character and will be given at the Hospitals and Dispensaries by the physicians and surgeons on duty. Practical instruction will also be given in several of the Laboratories at the School by the instructors in charge.

A detailed list of the Summer Courses will soon be announced. For further information address Dr. H. P. BOWDITCH, *Dean*, Harvard Medical School, Boylston Street, Boston, Mass.



## BOYLSTON MEDICAL PRIZES.

---

These prizes, open to public competition, are offered annually for the best dissertations on questions in medical science proposed by the Boylston Medical Committee.

At the annual meeting of 1890 it was voted that a prize of two hundred dollars be awarded to Andrew J. Parker, M.D., Ph.D., of Toledo, Ohio, for a dissertation entitled *Morphology of the Cerebral Convulsions, with Especial Reference to the Order of Primates*.

Also a prize of two hundred dollars to H. A. Hare, M.D., of Philadelphia, for a dissertation entitled *The Actions, Uses, and Values of Antipyretics*.

For 1891 two prizes are offered : —

1. A prize of two hundred dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology or Pathology*. The subject to be chosen by the writer.

2. A prize of one hundred dollars for the best dissertation on *The characteristic Appearance of Lesions produced by Weapons, and the differential Diagnosis of their Production on the living and dead human Body*. A study in legal medicine.

Dissertations on these subjects must be sent post-paid to W. F. WHITNEY, M.D., Harvard Medical School, Boston, Mass., on or before *Wednesday, April 1, 1891*.

For 1892 two prizes are offered : —

1. A prize of two hundred dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology or Pathology*. The subject to be chosen by the writer.

2. A prize of one hundred dollars for the best dissertation on *The Aetiology of Hospital Gangrene*.

Dissertations on these subjects must be sent to the same address as above on or before *Wednesday, April 2, 1892*.

In awarding these prizes preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear in place of its author's name some sentence or device and must be accompanied by a sealed packet bearing the same sentence or device and containing within the author's name and residence. *Any clew by which the authorship of a dissertation is made known to the committee will debar such dissertation from competition.*

Dissertations must be written in a distinct and plain hand, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within one year after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes :—

1. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.

2. That in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows, and consists of the following physicians :— ROBERT T. EDES, M.D., *President*, SAMUEL G. WEBBER, M.D., H. P. BOWDITCH, M.D., FRANK W. DRAPER, M.D., J. COLLINS WARREN, M.D., EDWARD S. WOOD, M.D., WILLIAM F. WHITNEY, M.D., *Secretary*, F. H. WILLIAMS, M.D.

The address of the *Secretary* is WILLIAM F. WHITNEY, M.D., Harvard Medical School, Boston, Mass.

## DEGREES.

—◆—

On Commencement Day, June 25, 1890, degrees were conferred as follows:—

### M.D. and A.M.

- ✓ George Arthur Craigin, A.B. 1885.    ✓ Frank Burr Mallory, A.B. 1886.  
 ✓ John Jenks Thomas, A.B. (*Williams Coll.*) 1886.

### M.D. (*Four years' course.*)

- |   |  |
|---|--|
| ✓ Edward Louis Burns.                                       | ✓ Edward Elvin Deal.   |
| ✓ Francis Edward Carroll, A.B. ( <i>Ford-ham Coll.</i> )    | ✓ Edward Stearns Johnson.                                    |
| ✓ Frank Spooner Churchill, A.B. 1886.                       | ✓ George Warton Kaan.  |
| ✓ Leo Melville Crafts, B.L. ( <i>Univ. of Minn.</i> ) 1886. | ✓ Francis Joseph Keleher, A.B. ( <i>Boston Coll.</i> ) 1886. |
|   | ✓ Thomas Horatio McCarthy.                                   |
|   | Albert Edward Rogers.  |

### M.D. (*Three years' course.*)

- |  |  |
|--|--|
| ✓ Julian William Baird, A.M., PH.C. ( <i>Univ. of Michigan</i> ) 1883. | ✓ George Eliot.  |
| ✓ George Andrew Bancroft.  | ✓ Edward William Finn.   |
| ✓ Everett Alanson Bates, A.B.  | ✓ Edward Milton Foote, A.B.  |
| ✓ Robert Mowry Bell.   | ✓ Lawrence Francis Xavier Forrest.   |
| ✓ Patrick Henry Campbell.  | ✓ John Patrick Gaffney, A.B.   |
| ✓ Irving Lloyd Carpenter.  | ✓ Edgar Garceau.   |
| Thomas Bernard Carpenter.  | ✓ Céran Joseph Gaveau.   |
| ✓ William Elisha Chenery, A.B. ( <i>Boston Univ.</i> ) 1887.           | ✓ Joel Ernest Goldthwait, S.B.   |
| ✓ Walter Thomas Clark, A.B.  | ✓ George Clifton Hall.   |
| ✓ Irving Oscar Cummings, S.B. ( <i>Dartmouth Coll.</i> ) 1887.         | ✓ Joseph Hicks.  |
| ✓ Rufus Elmer Darrah.  | ✓ Henry Russell Hitchcock, A.B. ( <i>Brown Univ.</i> ) 1884, A.M. ( <i>Ibid.</i> ) 1888. |
| ✓ William Parsons Derby.   | ✓ Eugene Martin Holden.  |
| ✓ John Duff, S.B. ( <i>Mass. Inst. of Technol.</i> ) 1881.             | ✓ Thomas Lincoln Jenkins.  |
|  | ✓ Joseph Aloysius Kenefick, S.B.   |
|  | ✓ William Rufus King.  |

- ✓ William Henry Aloysius Lyons, A.B. ✓ Albert Henry Prouty.  
 (*Holy Cross Coll.*) 1886. John Edward Ray. ✓  
 Oscar Fitzallan MacCallum. ✓ Marcellus Reeves. ✓  
 John Joseph McGuigan, B. (*Bos-* William Alfred Rolfe. ✓  
*ton Coll.*) 1887. Ralph Holland Seelye, A.M. ✓  
 John Milne Mackenzie, A.B. (*Brown* Henry Alden Shaw. ✓  
*Univ.*) 1876, A.M. (*Ibid.*) 1879. Amos Gale Straw, A.B. (*Dartmouth*  
*Coll.*) 1887.  
 Joseph Ignatius McLaughlin, B. Hermon Franklin Titus, A.B. (*Madi-* ✓  
 Francis Joseph McQueeney. ✓ *son Univ.*) 1873, A.M. (*Ibid.*)  
 William Joseph Morony. ✓ 1876.  
 James Gregory Mumford, A.B. Edward John Welch, A.B. (*Holy*  
 Edward Flavian O'Shea. ✓ *Cross Coll.*) 1887.  
 Franklin Sawyer Palmer, A.B. 1886. ✓ Robert Archibald Wheaton. ✓  
 Henry Ward Parker. ✓ Frank Stowell Whittemore. ✓  
 Frank Edwin Peckham, PH.B. ✓ Hubert Granville Wilbur, A.B. ✓  
 Clarence Whitfield Pelton. ✓ Charles Dean Young, A.B. (*Univ.* ✓  
 Edward Elisha Pierce, A.M. (*Brown* *of Rochester*) 1885, A.M. (*Ibid.*)  
*Univ.*) 1880. 1888.  
 Henry Lincoln Plummer. ✓

The following tabular view illustrates the distribution of studies throughout the year.

1890-91, FROM SEPTEMBER 25 TO JUNE 24.

First Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy, L. Prof. Dwight, Lect. Room C.		Anatomy, L. Prof. Dwight, Lect. Room C.		*Anatomy, R. Drs. Conant & Munro, Lect. Room C & D.	† Histology L. † Embryol. L. Asst. Prof. C. S. Minot, Lect. Room B.
10	§ Physiol. L. or Conf. Prof. Bow- ditch, Lect. Room A. † Materia M. Dr. C. Har- rington, Lect. Room E.	{ Histol. Asst. Prof. C. S. Mi- not & Dr. Quincy. Laborat. }	{ *Practical Physiol. Dr. J. W. Warren. Physiol. Laborat. }	{ Histol. Asst. Prof. C. S. Mi- not & Dr. Quincy. Laborat. }	† Materia M. Dr. C. Har- rington, Lect. Room E.	Physiol. R. Prof. Bow- ditch, Lect. Room A.
11	{ † Histol. Asst. Prof. C. S. Mi- not & Dr. Quincy, Laborat. }	Physiol. L. Prof. Bow- ditch, Lect. Room A.			Physiol. L. Prof. Bow- ditch, Lect. Room A.	{ Chemis. R. or L. Prof. Hills, Lect. Room A 1st 10 w. *Pract. Physiol. Dr. J. W. Warren. Ph. Lab. }
12	{ † Histol. Asst. Prof. C. S. Mi- not & Dr. Quincy, Laborat. }	Anatomy L. Prof. Dwight, Lect. Room C.	Chemistry L. Prof. Hills, Lect. Room A.	Chemistry, L. Prof. Hills, Lect. Room A.	† Hygiene, L. Dr. Harring- ton, Lect. Room E.	{ Chemis. R. or L. Prof. Hills, Lect. Room A 1st 10 w. *Pract. Physiol. Dr. J. W. Warren. Ph. Lab. }
2	Laboratory. † Chemis., L. Prof. Wood, Lect. Room A.	Laboratory.	Laboratory. † Chemis., L. Prof. Wood, Lect. Room A.	{ *Practical Physiol. Dr. J. W. Warren, Physiol. Laborat. }	Laboratory.	
3	Laboratory.	Laboratory.	Laboratory.		Laboratory.	
4		Laboratory.	Laboratory.		Laboratory.	
5	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.		Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.		Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	

\* In sections.

† In the first half-year.

‡ In the second half-year.

§ At 11 in second half-year.

A. = McLean Insane Asylum; C. = Boston City Hospital; Ch. = Children's Hospital; Cl. = Clinic; D. = Boston Dispensary; E. = Eye and Ear Infirmary; L. = Lecture; Ly. = Boston Lying-in Hospital; M. = Massachusetts General Hospital; O.P.Cl. = Out Patient Clinic; R. = Recitation; S. = Samaritan Home; S.B. = So. Boston Insane Asylum; W. = Free Hospital for Women.

These abbreviations refer to the following as well as to the above tables.

Second Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, No. Grove St.	†Bandaging. Dr. Burrell, N. Grove St.
9	Clin. Med. Prof. Shat- tuck, M. G. H.	Clin. Med. Asst. Prof. Mason, B. C. H. Bost. Disp.	Clin. Med. L. Prof. Shat- tuck, M. G. H.	Clin. Med. Dr. Vickery, M. G. H.	Clin. Med. Asst. Prof. Mason, B. C. H. Bost. Disp.	Clin. Med. Prof. Shat- tuck, M. G. H. ††Med. Visit. B. C. H. Asst. Prof. Mason.
10	††Surg. Clin. M. G. H. and B. C. H. †Laryngo'py. Prof. Knight, M. G. H.	††Surg. Clin. M. G. H. and B. C. H. †Laryngo'y. Dr. Hooper, M. G. H.   Therapeut's. Asst. Prof. F. H. Williams, B. C. H. 10-11.30.	††Surg. Clin. M. G. H. and B. C. H. †Laryngo'py. Prof. Knight, M. G. H. Laboratory. Drs. Wood & Emerson.	††Surg. Clin. M. G. H. and B. C. H. †Laryngo'y. Dr. Hooper, M. G. H. Laboratory. Drs. Wood & Emerson.	††Surg. Clin. M. G. H. and B. C. H. †Laryngo'py. Prof. Knight, M. G. H.   Therapeut's. Asst. Prof. F. H. Williams, B. C. H. 10-11.30.	††Surg. Visit. B. C. H. Oct. 1-May 1. †Laryng'y. Dr. Hooper, M. G. H.
11	*Auscultation Drs. Garland, Gannett, & Withington, M. G. H., Bost. Disp., & B. C. H.	*Auscultation	*Auscultation Cl. Conf. Child. Asst. Prof. Rotch & Drs. Buckingham & Sherman, Mar. & Apr. No. Grove St.	*Auscultation	*Auscultation B. C. H. Operations.	*Auscult. M. G. H. Operations.
12	Clin. Sur. after Oct. Profs. Porter & Warren. M. G. H.	**Surg. Visit. M. G. H. Paediatrics. Asst. Prof. Rotch, Mar. & Apr. Lect. Room B.	Surg. Conf. Prof. Porter, M. G. H. after Oct.	Adv. Anat. L. Prof. Dwight, Lect. Room C.	Pathology, L. Prof. Fitz, Lect. Room C.	Museum.
2	§Chemistry, L. Prof. Wood, Lect. Room A.	Path. Histol. Drs Whitney & Gannett, Laborat.	Chem. L. or R. Prof. Wood, Lect. Room A.	†Bact'y. 6 L. Dr. Ernst, Lect. Room B.	Path. Histol. Drs Whitney & Gannett, Laborat.	
3	Pathology. R. & Dem. Prof. Fitz, Laboratory.		Pathology, L. Prof. Fitz, Lect. Room C.	Pathology. Dem. & R. Prof. Fitz, Laboratory.		
4	†Therapeut's. Asst. Prof. F. H. Williams, Lect. Room E.	Theo. & Pr. R. Dr. Cutler, Lect. Room E.	†Therapeut's. Asst. Prof. F. H. Williams, Lect. Room E.	Theo. & Pr. R. Dr. Cutler, Lect. Room E.	Clin. Conf. Profs. Shat- tuck and Mason, and Drs. Garland and Vickery, Lect. Room C.	
5	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	†Therapeut's. Asst. Prof. F. H. Williams, Lect. Room E.	Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.		Pract. Anat. Asst. Prof. M. H. Richard- son, Lect. Room D.	

\* Till February in sections.

† In first half-year.

‡ Till January in sections.

§ Examination in February.

|| In second half-year in sections.

†† Each half of the class on alternate weeks till Feb.

\*\* In sections of half the class till March.

††† In sections.

Third Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Clin. Med. Prof. Shattuck, M. G. H. † Med. Visit. B. C. H. Asst. Prof. Mason.	Clin. Med. Asst. Prof. Mason, B. C. H. Boston Disp.	Clin. Med. Prof. Shattuck, M. G. H.	Clin. Med. Dr. Vickery, M. G. H.	Clin. Med. Asst. Prof. Mason, Ophthal. Cl. Prof. Williams Clin. Otol. Jan.—Mar. Prof. Green, B. C. H.	Clin. Med. Prof. Shattuck, M. G. H.
10		{ Gynaeceol. Cl. Boston Disp.	Cl. Dermatology. Prof. White, M. G. H.	Dis. of Nerv. System. Dr. Putnam, M. G. H.	Surg. Visit. B. C. H. Gynaeceol. Cl. Boston Disp. till April.	
11	{ † Surg. Visit. Oct.—May B. C. H. 10—11.30. }	{ † Surg. Cl. Prof. Cheever. Oct.—May B. C. H. 10—11.30. }	Diseases of Children. Asst. Prof. Rotch. No. Grove St.	† Med. Visit. M. G. H. Prof. Shattuck, Nov.—Mar. Cl. E. & E. Inf. Jan. Feb. Mar. Profs. Blake and Green.	Operations, B. C. H. Child. Dis. Asst. Prof. Rotch. Lect. Room B. Oct. & Mar.—June, Disp. Nov.—Mar.	Operations. M. G. H.
12	Surg. Cl. M. G. H. after Oct. Profs. Porter and Warren.	Surg. Anat. L. Mar. & Apr. Prof. Porter, Lect. Room D.	Surg. Conf. Prof. Porter. after Oct. M. G. H.	† Surg. Cl. M. G. H. Profs. Porter and Warren.	† Syphilis. Dr. Post, Oct. Lect. Room B. Nov.—Feb. Boston Disp.	Museum.
2	Gynaeceol. L. Prof. Baker, Lect. Room B. **Practical Bacteriology. Dr. Ernst.	**Practical Bacteriology. Dr. Ernst.	*Legal Med. § Prof. Draper, Lect. Room E.	* Ophthal. L. Prof. Williams Lect. Room A. **Practical Bacteriology. Dr. Ernst.	* Legal Med. Prof. Draper, Lect. Room E.	**Practical Bacteriol. Dr. Ernst.
3	Theo. & Prac. L. Prof. Minot, Lect. Room E.	* Ophthalmology, L. § Prof. Williams, Lect. Room A. † Mental Dis. Dr. Fisher, Lect. Room A.	Obstetrics, L. Prof. Richardson, Lect. Room B.	Theo. & Prac. L. Prof. Minot, Lect. Room E.	Obstetrics, L. Prof. Richardson, Lect. Room B.	Ment. Dis. Clinic. † Bos. Lun. Hosp. Dr. Fisher. Sch. f. Feeb. Mind. Chil. Jan. & Feb.
4	Surgery, L. Prof. Warren or Cheever, Lect. Room C.	Dermatology, L. Prof. White, Lect. Room B.	Surgery, L. Prof. Warren till Jan. Lect. Room C.	Surgery, L. Prof. Cheever, Lect. Room C.	Clinical Conf. Profs. Shattuck and Mason, and Drs. Garland and Vickery, Lect. Room C.	
5	Otol. L., Oct., Nov., Dec., Lect. Room B. Prof. Blake, Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D. Obstet. Conf. Dr. Green, after Jan. 1. Lect. Room B.	Obstetrics, R. Dr. Green, Lect. Room B.	Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	Otol. L., Oct., Nov., Dec., Lect. Room B.	Pract. Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	

\* During first half year.

† During second half-year.

‡ Until March 1.

§ Examination in February.

|| For half the class.

†† Each half of the class on alternate weeks,

\*\* In sections.

## Fourth Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Prof. Fitz, Medical Visit (12) M. G. H.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Prof. Fitz, Medical Visit (12) M. G. H.
<b>10</b>	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
<b>11</b>	Prof. Richardson, Chn. Obstet. (5) Lying-in Hosp.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.		Dr. Wadsworth, Ophthalmos'y (6) M. G. H.	Prof. Richardson, Chn. Obstet. (5) Lying-in Hosp.	Dr. Garland, Medical Clinic (c) Dispensary.
<b>12</b>		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.				
<b>3</b>	Prof. Draper, Legal Med. (c) B. C. H.	Prof. Baker, Women's Dis. (6) Free Hospital.	Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		
<b>4</b>	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Strong, Women's Dis. (2) Free Hospital.	

NOTE. — The time at which each exercise begins is shown in the margin at the left of each page; the time of its ending is subject to the instructor's convenience.



	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Dr. Gannett, Medical Clinic (c) M. G. H.	Prof. Williams, Eye Diseases (c) City Hospital,	Prof. Green, Ear Diseases (4) Eye & Ear. Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Dis. (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
<b>11</b>	Prof. Richardson, Clin. Obstet. (5) Lying-in Hosp.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.		Dr. Wadsworth, Ophthalmos'y (6) M. G. H.	Prof. Richardson, Clin. Obstet. (5) Lying-in Hosp.	Dr. Watson, Genito-Urinary Diseases (6) B. C. H. Dr. Garland, Medical Clinic (c) Dispensary.
<b>12</b>		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.				
<b>2</b>			Dr. Whitney, Pathol. Anat. (c) College.		Dr. Cowles, Mental Dis. (6) McLean Asylum.	
<b>3</b>	Prof. Draper, Legal Med. (c) B. C. H.	Prof. Baker, Women's Dis. (6) Free Hospital.	Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		
<b>4</b>	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Strong, Women's Disp. (2) Free Hospital.	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Strong, Women's Dis. (2) Free Hospital.	

The numbers in parentheses indicate the maximum number of students who will be admitted to the several exercises; the membership of the sections is determined by the instructors. At the exercises marked (c) the whole class may attend together.

## DECEMBER.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf. Dr. Gannett, Medical Clinic (c) M. G. H.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Green, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, (15) Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary. Dr. Burrell, Surg. Clinic (10) City Hospital.	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, (15) Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
<b>11</b>		Dr. Wadsworth, Ophthalmos'y (5) M. G. H.		Dr. Wadsworth, Ophthalmos'y (6) M. G. H.		Dr. Watson, Genito-Urinary Diseases (6) B. C. H. Dr. Garland, Medical Clinic (c) Dispensary.
<b>12</b>		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.				
<b>2</b>			Dr. Whitney, Pathol. Anat. (c) College.		Dr. Cowley, Mental Dis. (6) McLean Asylum.	
<b>3</b>	Prof. Draper, Legal Med. (c) B. C. H.	Prof. Baker, Women's Dis. (6) Free Hospital.	Prof. Draper, Legal Med. (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		
<b>4</b>	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Strong, Women's Dis. (2) Free Hospital.	

JANUARY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>		Prof. Green, Ear Diseases (4) Eye & Ear Inf. Dr. Gannett, Medical Clinic (c) M. G. H.		Prof. Green, Ear Diseases (4) Eye & Ear Inf.		Prof. Green, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>	Prof. Knight, Dis. of Throat (8) M. G. H. Dr. Burrell, Surg. Clinic (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Prof. Knight, Dis. of Throat (8) M. G. H. Dr. Elliot, Women's Dis. (3) Dispensary. Dr. Burrell, Surgical Clin. (10) City Hospital.		Prof. Knight, Dis. of Throat (8) M. G. H. Prof. White, Skin Diseases (15) M. G. H.	Dr. Elliot, Women's Dis. (3) Dispensary.
<b>11</b>	Dr. Greenough, Syphilis (6) Dispensary. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Wadsworth, Ophthalmos'y (5) M. G. H.	Dr. Greenough, Syphilis (6) Dispensary. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Wadsworth, Ophthalmos'y (6) M. G. H.	Prof. Warren, Surgical Visit (c) M. G. H.	
<b>12</b>		Dr. Cabot, Genito-Urinary Diseases (e) M. G. H.				
<b>2</b>			Dr. Whitney, Pathol. Anat. (c) College.		Dr. Cowles, Mental Dis. (6) McLean Asylum.	
<b>3</b>	Prof. Draper, Legal Med. (c) B. C. H.	Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.		Dr. Fisher, Mental Dis. (c) Boston Lun. Hosp.
<b>4</b>		Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Homans, Ovar. Tumors (c) College.		Dr. Strong, Women's Dis. (2) Free Hospital.	

## FEBRUARY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>	Prof. Knight, Dis. of Throat (8) M. G. II. Dr. Burrell, Surg. Clinic (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. II.	Prof. Knight, Dis. of Throat (8) M. G. II. Dr. Burrell, Surg. Clinic (10) City Hospital.	Dr. Tilden, Gen.-Urin. Dis. (4) Dispensary. Dr. Walton, Nervous Dis. (6) M. G. II.	Prof. Knight, Dis. of Throat (8) M. G. II. Prof. White, Skin Diseases (15) M. G. II.	Dr. Walton, Nervous Dis. (6) M. G. II.
<b>11</b>	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. II.	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.		Prof. Warren, Surgical Visit (c) M. G. II.	Dr. Doe, Women's Dis. (4) City Hospital.
<b>12</b>	Dr. Greenough, Syphilis (6) Dispensary.		Dr. Greenough, Syphilis (6) Dispensary. Dr. Whitney, Pathol. Anat. (c) College.			
<b>2</b>						
<b>3</b>	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	Prof. Baker, Women's Dis. (16) Free Hospital.	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
<b>4</b>		Dr. Strong, Women's Dis. (2) Free Hospital.	Dr. Homans, Ovar. Tumors (c) College.		Dr. Strong, Women's Dis. (2) Free Hospital.	
<b>7</b>	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*

\* After February 14.

MARCH.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Vickery, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>	Prof. Knight, Dis. of Throat (8) M. G. H. Dr. Burrell, Surgical Clin. (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Prof. Knight, Dis. of Throat (8) M. G. H. Dr. Burrell, Surgical Clin. (10) City Hospital.	Dr. Tilden, Genito-Urinary Diseases (4) Dispensary. Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. Knight, Dis. of Throat (8) M. G. H. Prof. White, Skin Diseases (15) M. G. H.	Dr. Walton, Nervous Dis. (6) M. G. H.
<b>11</b>	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. H.	Dr. Knapp, Nervous Dis. (4) City Hospital. Dr. Tilden, Skin Diseases (4) City Hospital.			Dr. Garland, Medical Clinic (c) Dispensary. Dr. Doe, Women's Dis. (4) City Hospital.
<b>12</b>	Dr. Greenough, Syphilis (6) Dispensary.		Dr. Greenough, Syphilis (6) Dispensary. Dr. Whitney, Pathol. Anat. (c) College.			
<b>2</b>		Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.		Prof. Baker, Women's Dis. (16) Free Hospital.	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
<b>3</b>	Dr. Durgin, Hygiene (c) College.		Dr. Ernst, Bacteriology (c) College.			
<b>4</b>		Dr. Strong, Women's Dis. (2) Free Hospital.			Dr. Strong, Women's Dis. (2) Free Hospital.	

## APRIL.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Vickery, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>		Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital.	Dr. Tilden, Genito-Urinary Diseases (4) Disp. Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital. Dr. Walton, Nervous Dis. (6) M. G. H.
<b>11</b>	Prof. Richardson, Chn. Obstet. (5) Lying-in Hosp. Dr. Gay, Surg. Visit (10) City Hospital. Dr. Knapp, Nervous Dis. (4) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. H.	Dr. Gay, Surgical Visit (10) City Hospital. Dr. Knapp, Nervous Dis. (4) City Hospital.		Prof. Richardson, Chn. Obstet. (5) Lying-in Hosp.	Dr. Watson, Genito-Urinary Diseases (6) B. C. H. Dr. Garland, Medical Clinic (c) Dispensary. Dr. Doc, Women's Dis. (4) City Hospital.
<b>12</b>	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Greenough, Syphilis (6) Dispensary. Dr. Whitney, Pathol. Anat. (c) College. Dr. Ernst, Bacteriology (c) College.			
<b>2</b>						
<b>3</b>				Prof. Baker, Women's Dis. (16) Free Hospital.		Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
<b>4</b>	Prof. Porter, Op. Surgery (c) College.*	Dr. Strong, Women's Dis. (2) Free Hospital. Prof. Porter, Op. Surgery (c) College.*	Prof. Porter, Op. Surgery (c) College.*	Prof. Porter, Op. Surgery (c) College.*	Dr. Strong, Women's Dis. (2) Free Hospital. Prof. Porter, Op. Surgery (c) College.*	Prof. Porter, Op. Surgery (c) College.*
<b>7</b>	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*

\* After April 15.

MAY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
<b>9</b>	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Prof. Williams, Eye Diseases (c) City Hospital.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Viekey, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
<b>10</b>		Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinie (6) City Hospital.	Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Watson, Surgical Clinic (6) City Hospital.  Dr. Walton, Nervous Dis. (6) M. G. H.
<b>11</b>	Prof. Richardson, Clin. Obstet. (5) Lying-in Hosp.  Dr. Gay, Surgical Visit (10) City Hospital.  Dr. Knapp, Nervous Dis. (4) City Hospital.	Dr. Gannett, Cardiac Dis. (e) M. G. H.	Dr. Gay, Surgical Visit (10) City Hospital.  Dr. Knapp, Nervous Dis. (4) City Hospital.		Prof. Richardson, Clin. Obstet. (5) Lying-in Hosp.	Dr. Garland, Medical Clinic (e) Dispensary.  Dr. Doe, Women's Dis. (4) City Hospital.
<b>3</b>		Dr. Fisher, Mental Dis. (c) College.  Prof. Baker, Women's Dis. (6) Free Hospital.	Cooking School. (e)	Prof. Baker, Women's Dis. (16) Free Hospital.	Cooking School. (c)	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
<b>4</b>		Dr. Strong, Women's Dis. (2) Free Hospital.				

## SUMMER COURSES.



During the summer of 1890, courses, chiefly clinical, were given by the instructors of the School to graduates and advanced students. A list of these courses is given on pp. 370, 371.

### STUDENTS.

Baker, Frederic Herbert,	Billerica.
Balch, Franklin Green, A.B. 1888,	Jamaica Plain.
Bancroft, George Andrew,	Lancaster.
Brough, David Dandie, A.B. ( <i>Princeton Coll.</i> ) 1888,	Providence, R. I.
Cabot, Follen,	Brookline.
Clark, Sidney Avery, A.B. ( <i>Amherst Coll.</i> ) 1888,	Northampton.
Coggeshall, Frederic, A.B. 1886,	Cambridge.
Covell, Henry Hall, A.B. ( <i>Yale Univ.</i> ) 1888,	Rochester, N. Y.
Cutler, George Washington,	Waltham.
Faulkner, William Edward, A.B. 1887,	Keene, N. H.
Finn, Edward William,	Dedham.
Francis, Carleton Shurtleff, A.B. 1888,	Brookline.
Garrison, John Cushing, M.D.	Franklin.
Gorey, James Philip,	Fitchburg.
Hicks, Joseph,	Newton.
Higgins, Frank Albert, S.B. ( <i>Worcester Polytech.</i> ) 1886,	Manchester, N. H.
Hitchcock, Henry Russell, A.M. ( <i>Brown Univ.</i> ) 1888,	Foxboro'.
Holder, Oscar Howe, A.B. 1888,	Boston.
Hoyt, Edward Malcolm,	Wentworth, N. H.
Jackson, James Marsh, A.B. 1887,	Roxbury.
Keany, Francis Joseph, A.B. ( <i>Boston Coll.</i> ) 1888,	Boston.
Kidder, Edward Hamilton, A.B. 1888,	Lincoln.
King, William Rufus,	Charlestown.
Lamson, Herbert Huntington, M.D.	Hanover, N. H.
Lund, Fred Bates, A.B. 1888,	Concord.
Miller, Henry Cowles, A.B. 1886,	Melrose.
Morse, John Lovett, A.B. 1887,	Roxbury.
Murphy, Timothy Joseph, A.B. ( <i>Boston Coll.</i> ) 1888,	Roxbury.
O'Brien, John Francis, A.B. ( <i>Boston Coll.</i> ) 1888,	Charlestown.
Oakey, Daniel,	Cambridge.
Pierce, Edward Elisha, A.M. ( <i>Brown Univ.</i> ) 1880,	Providence, R. I.
Porter, Charles Allen, A.B. 1888,	Boston.



Richardson, Frank C., M.D.	E. Boston.
Richardson, H. R.,	
Risk, Winthrop Allen,	Lawrence.
Rowen, Henry Stanislaus,	Cambridge.
Sawyer, Walter Fairbanks,	Keene, N. H.
Stebbins, Walter Gay, A.B. ( <i>Yale Univ.</i> ) 1886,	Springfield.
Stowell, Edmund Channing, A.B. 1888,	Boston.
Swan, Will Howard,	Winchester.
Taylor, Edward Wyllys, A.B. 1888,	Montclair, N. J.
Tenney, Benjamin, A.M. ( <i>Dartmouth Coll.</i> ) 1887,	Boston.
Terry, Charles Church, M.D.	Fall River.
Towle, Harvey Parker, A.B. 1888,	Somerville.
Tuttle, George Herman, A.B. 1887,	Acton Centre.
Webster, George Arthur, M.D.	Boston.
Wheeler, Charles Douglas, A.B. ( <i>Williams Coll.</i> ) 1888,	Worcester.
Whipple, Farrington Hasham, A.B. 1888,	Portland, Me.

Similar courses will be given during the summer of 1891.

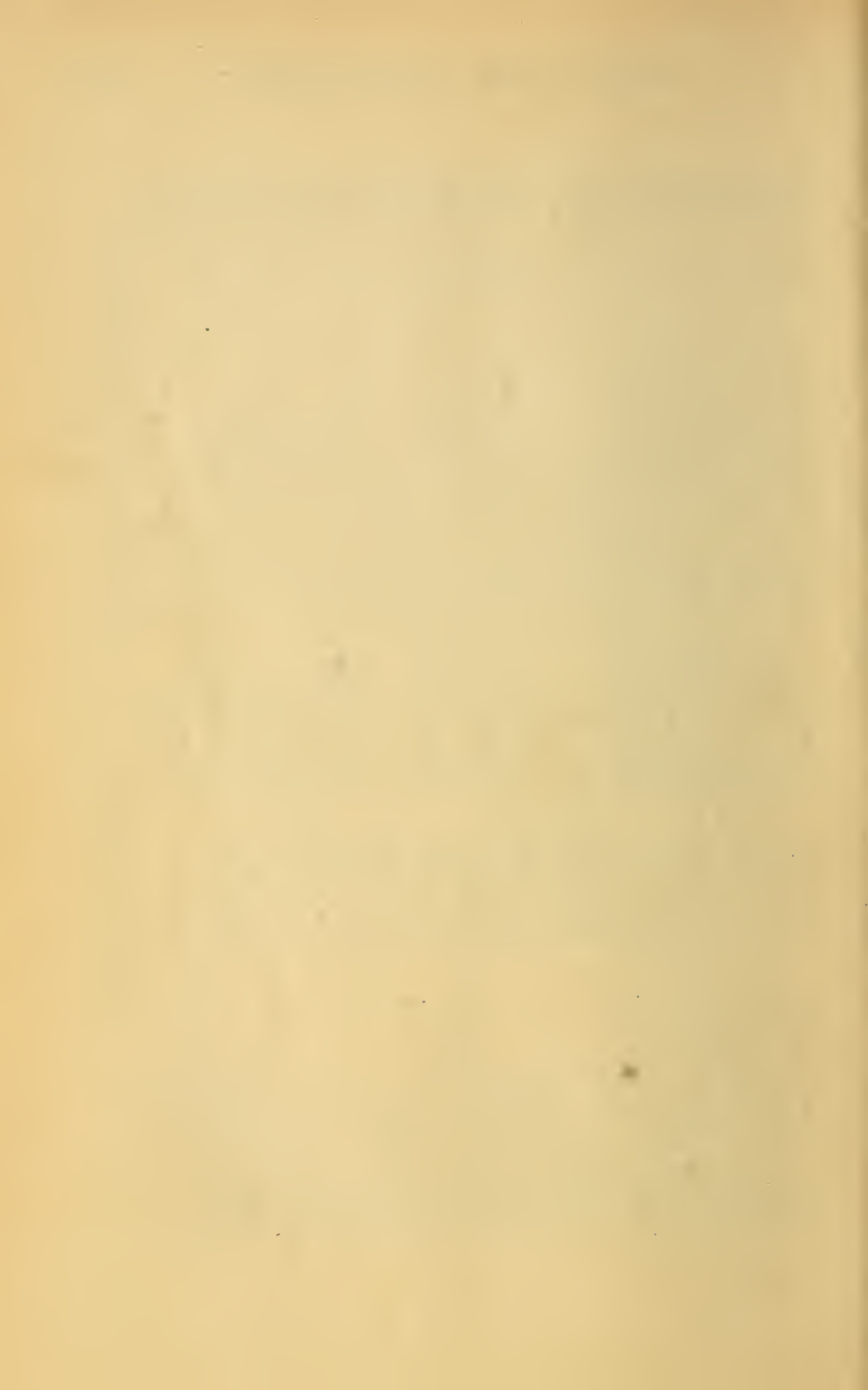
For particulars, address *The Secretary, Harvard Medical School*  
Boston, Mass.

Subject.	Instructor.	Place.	Begins.	Ends.	Days.	Hour.	Fee
Clinical Medicine	Dr. Gannett	Mass. Gen. Hosp.	July 2	Aug. 15	Mo. We. Fr.	10	20.00
Clinical Medicine	Dr. Gannett	Mass. Gen. Hosp.	Aug. 18	Sept. 29	Mo. We. Fr.	10	20.00
Clinical Medicine	Dr. Withington	City Hosp.	July 1	July 26	Tu. Th. Sat.	10.30	15.00
Physical Diagnosis	Dr. Garland	Mass. Gen. Hosp. <sup>1</sup>	July 1	July 31	Daily	9.30	20.00
Physical Diagnosis	Dr. Garland	Mass. Gen. Hosp.	Aug. 1	Aug. 30	Daily	9.30	20.00
Physical Diagnosis	Dr. Withington	City Hosp.	Aug. 5	Aug. 30	Tu. Th. Sat.	10.30	15.00
Diseases of the Ear	Dr. Blake	Eye and Ear Inf.	Sept. 8	Oct. 3	Mo. Tu. Th. Fr.	10	25.00
Diseases of Chest and Abdomen	Dr. Cutler	Mass. Gen. Hosp.	July 1	Aug. 12	Tu. Th. Sat.	10	20.00
Nervous Diseases	Dr. Putnam	Mass. Gen. Hosp.	July 2	July 30	Mo. We. Fr.	10	20.00
Children's Diseases	Dr. Buckingham	Children's Hosp.	June 2	July 7	Mo. Th. Sat.	10.30	15.00
Children's Diseases	Dr. Buckingham	City Hosp.	July 10	Aug. 15	Mo. Th. Sat.	10.30	15.00
Children's Diseases	Dr. Sherman	Boston Dispensary	Aug. 18	Sept. 29	Mo. Th. Sat.	10.30	20.00
Syphilis	Dr. Post	Boston Dispensary	Sept. 1	Sept. 29	Mo. We. Fr.	10.30	15.00
Skin Diseases	Dr. Tilden	City Hosp.	July 2	Aug. 15	Mo. We. Fr.	11	20.00
Clinical and Operative Surgery <sup>2</sup>	Dr. Richardson	Mass. Gen. Hosp.	July 1	Aug. 12	Tu. We. Th. Sat.	11	25.00
Clinical and Operative Surgery <sup>2</sup>	Dr. Richardson	Mass. Gen. Hosp.	Aug. 13	Sept. 30	Tu. We. Th. Sat.	11	25.00
Clinical and Operative Surgery	Dr. Post	City Hosp.	July 2	July 30	Mo. We. Fr.	10	20.00
Clinical and Operative Surgery	Dr. Burrell	City Hosp.	Aug. 2	Aug. 30	Tu. Th. Sat.	11	20.00

	Dr. Burrell	City Hosp.	Sept. 2	Sept. 30	Tu. Th. Sat.	11	20.00
Clinical and Operative Surgery	Dr. Cabot	Mass. Gen. Hosp.	July 2	Aug. 14	Mo. We. Th. Sat.	11	25.00
Genito-urinary Surgery	Dr. Watson	City Hosp.	June 3	July 15	Tu. Th. Sat.	11	25.00
Minor Surgery	Dr. Mixter	Mass. Gen. Hosp.	July 2	July 30	Mo. We. Fr.	10	20.00
Minor Surgery	Dr. Mixter	Mass. Gen. Hosp.	Aug. 1	Aug. 29	Mo. We. Fr.	10	20.00
Surgical Landmarks	Dr. Monks	Boston Dispensary	June 16	June 30	Mo. We. Fr.	11	10.00
Obstetrics <sup>2</sup>	Dr. Green	}	June 1	July 31			30.00
Obstetrics <sup>2</sup>	Dr. Reynolds		Aug. 1	Sept. 30			30.00
	Dr. Townsend		Aug. 4	Aug. 16	Daily	3.30	20.00
Operative Obstetrics	Dr. Reynolds	Medical School	July 7	July 19	Daily	3.30	20.00
Operative Obstetrics	Dr. Townsend	Medical School	July 1	July 18	Tu. Fr.	4	20.00
Minor Surgical Gynecology	Dr. Strong	Women's Free Hosp.	July 22	Aug. 8	Tu. Fr.	4	20.00
Minor Surgical Gynecology	Dr. Strong	Women's Free Hosp.	July 1	Aug. 15			20.00
Legal Medicine	Dr. Draper	Medical School	July 2	July 30	Mo. We. Fr.	3	20.00
Hygiene	Dr. Durgin	Medical School	July 1	Aug. 14	Daily		30.00
Hygiene	Dr. Harrington	Medical School	June 2	July 15	Daily		30.00
Bacteriology	Dr. Ernst	Medical School	June 23	July 31	Daily	10	35.00 <sup>3</sup>
Urinary Examinations	Dr. Hills	Medical School	June 23	July 31	Daily	10	35.00 <sup>3</sup>
Qualitative Analysis	Dr. Hills	Medical School	June 1	Sept. 1	3 times a week		25.00
Pathological Histology and practice in making autopsies <sup>4</sup>	Dr. Sears	Medical School and City Hosp.					

<sup>1</sup> Women's room.      <sup>2</sup> Class-membership limited.      <sup>3</sup> Five dollars will be refunded if no apparatus is broken.

<sup>4</sup> A course is of eight weeks duration, and the class can be joined at any time.



## EXAMINATION PAPERS.

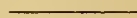
(*Annual Examination, 1890.*)



### First Year's Studies.

#### ANATOMY. — Professor DWIGHT.

1. What difference between red and white blood-corpuses?
2. What difference between hyaline cartilage and fibro-cartilage?
3. What is the shape and direction of the spinous process of (*a*) the 4th cervical vertebra? (*b*) of the 6th dorsal?
4. With what other bones does the scaphoid of the foot articulate?
5. Name and give the attachments of the ligaments connected with the outer end of the clavicle.
6. To what bones is the anterior annular ligament of the wrist attached?
7. Give the origin, insertion, and the chief action of the glutaeus maximus.
8. Give the nerve supply of the muscles of the fore-arm.
9. Give the origin and course of the optic tract as far as the commissure.
10. What does the aqueduct of Sylvius connect? What is above it? What below it?
11. What does the chorda tympani come from? What does it go to?
12. What are the parts of the subclavian artery?
13. What is the chief branch of the femoral artery? Where does it arise, and what does it supply?
14. Where does the duct of the pancreas open? Is any other duct near it?
15. What is the course of the vas deferens?
16. What opens into the right auricle?
17. What is the course of blood through the liver, naming the vessels?
18. What nerve crosses the external carotid transversely, and at what point does it cross it?
19. What, and where are Brunner's glands?
20. What are the Malpighian bodies of the spleen?



#### PHYSIOLOGY. — Dr. J. W. WARREN.

[Number the answers to the questions without copying the questions themselves. Do not number the pages of the book. Answer the questions in order, writing on each page in succession.]

1. How does the temperature of the body vary and how is it regulated? In what way is clothing useful?

2. Functions of the liver.
3. Urine : Purpose ; origin ; method of secretion and removal.
4. Explain myopia and hypermetropia, and give a diagram showing the course of the rays of light. How does presbyopia differ from these?
5. Describe the digestion of a *good* ham sandwich, i. e. the various changes (physical and chemical) from the time of entering the mouth until the rectum is reached. How are food materials transported through the digestive tract?
6. Action and usefulness of the vasomotor nerves.
7. Heart sounds : cause and character.
8. What proof is there of muscular as distinguished from nervous irritability?
9. Functions of the semi-circular canals.
10. Difference between a voluntary and a reflex action.

---

### GENERAL CHEMISTRY. — Professor HILLS.

(Write your answers strictly in the order of the questions. Reserve 3, 4. and 12, till you have finished the rest of the paper. Make your answers thorough. If pressed for time you may omit question 3.)

1. Define quantivalence ; isomerism. Illustrate. What information is given by the equation  $\text{CH}_4 + 2 \text{O}_2 = \text{CO}_2 + 2 \text{H}_2\text{O}$ ?
2. Chlorine. In what reactions is it set free? Uses? Upon what property, or properties, of chlorine does each of these uses depend?
3. (Take ONE only.) (a) Compounds of zinc. (b) Compounds of magnesium.
4. (Take ONE only ; (a) if you can.) (a) Water analysis. (b) Phosphorus.
5. Color and solubility (in water) of iodine ; potassium bromide ; potassium chlorate ; lithium carbonate ; potassium permanganate ; silver nitrate ; tartar emetic ; iodoform ; chloral hydrate ; tannin.
6. Carbon. What properties are common to all forms? How do the three allotropic forms differ? Most important property of carbon from a medical point of view? Applications?
7. Coal gas and Water gas. How made? How do they differ in composition? Is there any difference in the action of the two kinds on the system? If there is, upon what does the difference depend?
8. What are antiseptics? Three important practical applications? Name the best antiseptics for each purpose (in the order of efficiency, if you can).
9. Carbohc Acid. From what is it obtained? Uses? What changes does it undergo after absorption into the system?
10. What indications may the closed-tube test give in the presence of : oxalic acid ; corrosive sublimate ; ammonium chloride ; zinc sulphate ; magnesium sulphate?

11. How will you effect the solution of the first three solids (question 10) as a preliminary to systematic analysis? Describe briefly the tests which will indicate the presence of the metal and the acid in each of the solutions thus obtained.

12. (Take ONE only: (a) if you can.) (a) Ptomaines. (b) Cyanogen compounds.

MATERIA MEDICA. — Dr. HARRINGTON.

1. Define: extract, trituration, massa, liquor, oleatum.

2. Name the principal alkaloids contained in opium. What is opium denarcotisatum, and what advantage, if any, has it over opii pulvis? Dose of pulvis morphinae compositus. Chloral: solubility, dose, and method of administration. Why should chloral not be given with an alkali?

3. What part, or parts, of the plant is belladonna? stramonium? nuxvomica? cinchona? colchicum? Mention the active principles of digitalis, cinchona, jaborandi, erythroxyton, and conium.

4. Write a prescription for four ounces of a solution of iodide of potassium of such strength that each fluid-drachm will contain approximately ten grains. Write a prescription for bromide of sodium in 5-grain powders. What is the strength of solutions of hydrochlorate of cocaine as ordinarily employed? How is nitroglycerine used in medicine, and in what strength? Describe briefly and give the doses of the iodides of mercury.

5. Write prescriptions for the following preparations of iron: (1) reduced iron, (2) pyrophosphate, (3) tincture of the chloride, (4) syrup of the iodide, (5) citrate of iron and quinine.

6. Criticise the following prescription: —

℞ Pepsini saccharati.  
Sodii bicarbonatis, āā ʒj.  
M. et div. in capsulas XX.  
Sig. Two after each meal.

How use mustard as an emetic and as a local application? How make a turpentine stupe, and how use turpentine as an enema? What is the relative value of carbolic acid, corrosive sublimate, calx chlorata, and sulphur for purposes of disinfection?

7. Give the doses of the following: (1) oil of sandalwood, (2) antipyrin, (3) wine of ipecac, (4) santoninate of sodium, (5) sulphonal, (6) salicylic acid, (7) lactucarium, (8) podophyllum, (9) granatum, (10) Fowler's solution.

8. Mention the ingredients of the following: (1) Dover's powder, (2) paregoric, (3) collodium stypticum, (4) compound cathartic pill, (5) compound rhubarb pill.

9. (1) Dose of the tincture of strophanthus. (1) What is salol? Dose. (3) Dose and method of administration of guarana. (4) Tartar emetic: solubility, dose, and any incompatibles. (5) Solubility and dose of bromide of lithium and carbonate of lithium. (6) Mention the three principal anaesthetics in order of safety. (7) Dose and method of administration of hydrochlorate of pilocarpine. (8) What is the difference between ordinary cotton and that of U. S. P.? (9) What is the strength of liquor sodae? (10) How administer oleate of mercury?

10. Write prescriptions for the following: (1) extract of malt, (2) aromatic spirits of ammonia, (3) corrosive sublimate, (4) pills of aloes and asafoetida, (5) Epsom salts, (6) plaster of ammoniacum with mercury, (7) cod-liver oil, (8) compound tincture of catechu, (9) tincture of aconite, (10) tincture of nux vomica.

### Second Year's Studies.

#### MEDICAL CHEMISTRY. — Professor WOOD.

1. Explain the acidity of normal urine. What changes take place in the reaction of normal urine upon standing?

2. Test for indoxyl? Under what conditions is it increased?

3. How estimate the amount of phosphoric acid in urine? Under what conditions is it increased?

4. What is the character of the urine and sediment in chronic pyelitis? In chronic prostatitis?

5. What inferences can be drawn from urine having the following characteristics? Why?

Color = normal. Sp. Gr. = 1020. Acid. Considerable sediment.

Uph. = n.  $\bar{U}$ . = n. Cl. = n. E. P. = n.

Ind. = n.  $\bar{U}$ . = +. Sf. = n. A. P. = —.

Albumen = large trace. Bile and sugar absent.

Sediment = few abnormal blood globules. Excess of renal cells, some of which are fatty. Considerable number of hyaline and granular casts, some of which have a few blood and oil globules and renal cells adherent.

Total amount of urine = 1275 cub. cent.

“ “ “ urea = 27.438 grms.

“ “ “ chlorine = 8.504 “

“ “ “  $P_2O_5$  = 1.976 “

“ “ “ albumen = 1.912 “

6. Describe the appearance (microscopic) of the different varieties of epithelial cells which may be found in the urinary sediment, giving the relative size of each variety as compared with that of a pus corpuscle.

7. How detect mercury in the urine?

8. Symptoms and post-mortem appearances in digitalis poisoning?

#### PATHOLOGY AND PATHOLOGICAL ANATOMY. — Professor FITZ.

1. Describe the changes taking place in a dead part, regardless of the cause of death.

2. Define metastatic lesions and state how they may be brought about.

3. Enumerate the varieties of cellular degeneration.

4. Explain the relation between a bifid cranium and a bifid spine.

5. Enumerate the exciting causes of a multiple neuritis.



6. State the method of origin and results of an aneurism of the heart.
7. Describe the possible results of a thrombosis of the aorta.
8. State the significance of a bloody fluid in the pleural cavity.
9. Discriminate between the appearances of a fibrinous pneumonia and those of a hypostatic pneumonia.
10. State, in the order of relative frequency, the regions in the abdomen in which a peritonitis is likely to arise.
11. Discriminate between the appearances of a leucaemic and an amyloid spleen.
12. Enumerate the special causes of a stricture of the intestine.
13. State the post-mortem changes in the gastro-enteric canal likely to produce errors of anatomical diagnosis.
14. Enumerate the methods of origin of diseases of the liver.
15. Explain the occurrence of jaundice from disease of the pancreas.
16. State the causes of a considerable, symmetrical enlargement of the kidneys.
17. Describe the appearances of the kidneys in cantharidal poisoning.
18. Describe the appearances of a tubercular cystitis.
19. Enumerate the causes of enlargement of the uterus.
20. Discriminate between an inflammatory and a dropsical hydrocele.

---

## TOPOGRAPHICAL AND ADVANCED ANATOMY.

Professor DWIGHT.

1. Describe the chief fissures and convolutions of the convexity of the brain and place the chief motor centres.
2. State how to draw on the head lines showing (*a*) the lower border of the cerebrum, (*b*) the fissure of Sylvius, (*c*) the fissure of Rolando, (*d*) lateral sinus, (*e*) the longitudinal sinus.
3. Describe the innervation and circulation of the eye-ball.
4. Describe the course and relations of the oesophagus.
5. State very briefly the relation of the peritoneum to (*a*) the cæcum, (*b*) the duodenum, (*c*) the bladder, (*d*) the descending colon, (*e*) the rectum.
6. Give the position and relations of each kidney.
7. Give the relations of veins and nerves to the following arteries, naming the nerves: (*a*) the common carotid, (*b*) the brachial, (*c*) the femoral, (*d*) the radial, as far as the wrist, (*e*) the popliteal.
8. Describe the synovial sheaths of the palm of the hand and fingers, giving the arrangement, structure, and relation to surface.
9. (*a*) Opposite what point on the surface does the popliteal artery end? (*b*) What is the adductor tubercle a guide to? (*c*) What nerve may be felt in the popliteal region, and where? (*d*) What is the guide to the upper border of the joint of the elbow? (*e*) Where does the brachial artery end? (*f*) Where do the plantar arteries begin? (*g*) Where does

the common carotid divide? (*h*) What tendon is nearest to the internal maleolus behind? (*i*) At which end of the femur is ossification first completed? (*j*) Can the tibia ever be twisted on the femur?

10. The position and relations of the pancreas.

---

**THERAPEUTICS.** — Assistant Professor F. H. WILLIAMS.

1. Mention five cathartics. Prescriptions for each. Give the indications for their use.
2. Action and uses of nitrites? of ergot? Channels of elimination of the following: Iodide of Potassium · Quinine; Alcohol; Sulphate of Magnesium.
3. Action of alcohol?
4. Five drugs which may be used to promote sleep. Conditions appropriate to each and directions for their use.
5. Action of iron. The indications for its use and contraindications. The best preparations with their prescriptions.
6. Mention four cardiac stimulants and state the conditions under which they are of service.
7. Indications for the use of morphine. Prescription for its subcutaneous use.

---

**Third Year's Studies.**

**OBSTETRICS.** — Professor W. L. RICHARDSON.

1. In the gravid uterus, at the end of the fourth month, what new formations are of maternal and what of foetal origin?
2. Deformed pelvis. What measurements, and how made, would aid you in ascertaining the nature of the deformity? What would be the measurements, as thus made, of a normal pelvis?
3. Nausea and vomiting of pregnancy. Treatment?
4. A multipara, three months advanced in pregnancy, after a hard day's work, begins to flow freely and to have bearing-down pains. On your arrival, four hours later, you find her still flowing and having pains. You are unable to discover by questioning whether the ovum has been expelled or not. Everything that has come from her has been thrown away. Discuss the treatment.
5. A primipara, eight hours in labor, the os three fourths dilated, the child presenting O. L. A. at the inferior strait, begins to complain of faintness and wishes to be fanned. She is pale. Her pulse has risen from 84 to 128. Diagnosis? Treatment?
6. A primipara, seven and a half months pregnant, has a convulsion. On your arrival, half an hour later, all you can ascertain as to her general condition is that it has been excellent, with the exception of a headache the day before the attack. The patient is stupid and cannot answer questions intelligently. The foetal heart is normal. Treatment?

7. A multipara, after an hour of second stage labor, has brought the presenting head within the pelvic cavity. The small fontanelle is reached with some difficulty at the right sacro-iliac articulation. The large fontanelle is easily felt, lower than the small fontanelle, and directed to the left anterior. The cervix has retreated behind the head. No progress has been made for an hour. Diagnosis? Treatment?

8. A primipara has been in the second stage of labor three hours. The presenting breech (S. D. P.) has reached the pelvic floor. No progress has been made for an hour. The pains have become ineffectual. The patient shows symptoms of exhaustion. How would you proceed with the case?

9. After a normal confinement the temperature suddenly rises four degrees on the afternoon of the sixth day. No chill. Enumerate the various causes which might have produced the rise and make a differential diagnosis. Treatment?

10. Give in detail the method of using antiseptics in obstetric practice.

---

SURGERY. — Professor CHEEVER.

1. *a.* Concussion of the Brain.  
*b.* Concussion with Contusion of the Brain.  
*c.* Differential diagnosis of *a.* and *b.*  
*d.* Prognosis, and probable results, *a.* and *b.*  
*e.* Treatment of *a.* and *b.*
2. *a.* What precautions would you take to keep an operation wound aseptic?  
*b.* Give your reasons.
3. *a.* Describe all the affections of the Tonsil.  
*b.* Give the treatment.
4. *a.* The pathology of Carbuncle.  
*b.* The treatment.
5. *a.* Fracture of the anatomical neck of the Humerus.  
*b.* Diagnosis from dislocation.  
*c.* Diagnosis from other fractures.  
*d.* Treatment of *a.*  
*e.* Probable results of *a.*
6. *a.* Septicaemia.  
*b.* Nature of the poison.  
*c.* How do the symptoms differ from Pyaemia?
7. *a.* Chronic irreducible Hernia, not strangulated.  
*b.* Dangers of.  
*c.* Different modes of treatment.
8. *a.* Acute osteo-myelitis.  
*b.* Its cause.  
*c.* Symptoms.  
*d.* Results.
9. *a.* Rupture of the male Urethra.  
*b.* Various causes of *a.*  
*c.* Symptoms produced by *a.*  
*d.* Various treatments of *a.*

10. *a.* Cancer of the rectum.  
*b.* Piles.  
*c.* Differential diagnosis of *a.* and *b.*  
*d.* Treatment of *a.*; treatment of *b.*

---

CLINICAL SURGERY.—Professor PORTER.

CASE I. — Mr. A., aged 67, slipped and fell upon the sidewalk, striking, he knows not how, upon his left buttock. He found himself unable to rise, and when helped to his feet unable to step upon the left leg; in fact, had lost all power to move it. He was helped home and to bed, and the surgeon called. He found inability to raise the left leg from the bed; passive motion caused great pain at hip, and every few minutes there were muscular spasms in left thigh, causing violent outcries from pain. The left lower extremity was found  $\frac{3}{4}$  in. shorter than the right and everted.

- a.* What is the lesion?  
*b.* What is the treatment?  
*c.* What is the prognosis?  
*d.* What are the possible complications?

CASE II. — Mrs. B., aged 50, a multipara, a large fleshy woman, always healthy till her present trouble, except a tendency to constipation. Her present trouble dates back ten years and commenced with her fifth pregnancy, during which she accidentally discovered a small bunch at the umbilicus, rather soft, and unattended by any pain or discomfort. She thinks that at first it sometimes “went away,” to return again without “rhyme or reason.” As the years went by it increased, and after a few years was always there. Occasionally there were attacks of pain, varying in severity, and a few times associated with “retching.” Sometimes the pain demanded morphine. The tumor is now the size of a large cocoon lobulated, soft, in places tympanitic. No impulse on coughing.

- a.* What is the lesion?  
*b.* What the prognosis without treatment?  
*c.* What the treatment?  
*d.* What the prognosis with treatment?

CASE III. — Mr. C., aged 62 years, with good family history and good personal history, except malarial fever and chronic diarrhoea during army service, from which he “has long ago recovered.” A few weeks ago, during an active business day with considerable climbing of stairs, his right leg suddenly gave out and he was seized with a violent pain in right knee joint. After resting he was better and resumed his business, to suffer later in the day with a more violent attack of pain more definitely placed in the popliteal space. On undressing at night he found a tumor the size of a hen’s egg in the middle of the popliteal space. It seemed to him to “throb.” Examination showed a hard tumor pulsating and expansile synchronous with the heart, controlled by proximal pressure upon the femoral artery.

- a.* What is the lesion?  
*b.* What is the clinical history without treatment?  
*c.* What treatment would you advise?  
*d.* What is your prognosis?

## THEORY AND PRACTICE. — Professor F. MINOT.

(Answer the questions in their numerical order.)

1. Describe the symptoms of the early stage of pulmonary consumption. From what other diseases must it be discriminated, and how diagnosticated?
2. Give an account of pneumonia, including the etiology, diagnosis, prognosis, and treatment.
3. Describe a case of acute articular rheumatism, with the most important complications of that disease, and the treatment.
4. Give the symptoms, diagnosis, prognosis, and treatment of chronic interstitial nephritis.
5. Give the symptoms, diagnosis, and treatment of aneurism of the thoracic aorta.
6. Describe gastric ulcer, with the diagnosis and the treatment.
7. Give the principal symptoms of typhoid fever, with the most important complications, and the treatment.
8. What are the chief causes, the symptoms (including the physical signs), diagnosis, and treatment of endocarditis?

## CLINICAL MEDICINE. — Professor SHATTUCK.

[Give the differential diagnosis, the prognosis, and the treatment of as many of these cases as the time will allow, discussing them in the order in which they are arranged. Assume that symptoms not mentioned are wanting; but as omissions, intentional or not, may occur, state them if essential. Success will depend more upon the quality than upon the quantity of the work. The intelligent discussion of the cases will have more weight than a hasty and inconclusive though correct diagnosis.]

1. A school teacher, 50 years old, of large frame and 200 odd lbs. in weight, of good family history except that a brother died of Bright's disease at 39, seeks advice in Oct., 1888, chiefly to satisfy his wife. Thirty-five years ago he had a severe attack of dysentery, but has never lost a day since. He is not overworked. The previous winter he took care of his furnace himself, and noticed that it put him out of breath to shake down the ashes. In Dec., '87, he was passed for life insurance by one of the best companies. For the past six months he has been short of breath on exertion. During the summer it was remarked by his friends that he was looking pale; but he says that he felt and now feels perfectly well. A few weeks ago he had some pain in and swelling of the left ankle, which left him entirely in a few days.

He was pale but well nourished; pulse 108, regular, quick, rather hard. The cardiac impulse was felt in the fifth space, half an inch outside the mammillary line. When he lay on his left side, and after exercise, a slight systolic murmur was heard at and about the apex; but only under these circumstances. The aortic second was accentuated. The urine was 40 oz. daily, sp. gr. ranging over 1020, with a very slight trace of alb., and a few hyaline and fine granular casts. The character and amount remain essentially the same up to the present day. Physical examination was otherwise negative.

Under treatment there was marked and steady gain in color and wind, and of 10 lbs. in weight.

In May, '89, after riding in an open street-car, he was taken with pain and swelling in several of his larger joints, accompanied by moderate fever. These symptoms were subsiding when a fresh access of fever came on with sharp pain in the left side, orthopnoea, rapid and irregular pulse, slight oedema of the ankles, somewhat scanty and high-colored urine. Physical examination of the heart showed nothing new save the irregularity, rapidity—120–130—, and enfeeblement, especially of the first sound. There was some dulness at the left base in the back, which became more marked in the next days with feeble and distant respiratory murmur and diminished voice sounds, these signs extending half way up the scapula. Over the lower right back there were abundant subcrepitan rales without any striking dulness or change in the voice and breath sounds. There was no expectoration. The symptoms and signs gradually abated; the fever, higher in the P.M. than A.M., never exceeding 102°, lasting about two weeks, and terminating by slow lysis. June 19 the right chest was quite clear, the lower left back was still rather dull with relatively weak breath and voice sounds, the pulse 112, regular, and the patient could lie with the head low, and on either side.

By July 4 he was well enough to go to New Hampshire, where he continued to gain daily until Aug. 15, when, on waking in the A.M., he found that his left arm was powerless; the left leg and side of the face were slightly weak. His wife noticed that his utterance was somewhat thick, and he that he had a tendency to bite the inside of the left cheek during mastication. A day or two later the face and leg were perfectly restored; but it was two weeks before there was the slightest improvement in the arm. Then power gradually returned; but the arm was still weak, with increased tendon reflexes early in October, at which time he still, after moderate mental or physical exercise, had some lightness of the head. The pulse Oct. 7, '89, was 108, regular, of high tension. The heart was much the same as before. The urine averaged 50 oz. daily, sp. gr. 1020 or so, with a very slight trace of albumen and a few hyaline and fine granular casts of small diameter.

March 17 he reported a steady gain all winter and wished to resume teaching. Pulse 110, regular; the aortic second accentuated; the urine as above.

Diagnosis and treatment of each attack; ultimate prognosis?

2. A factory overseer, 63 years old, had been subject to constipation for 5 years, and for two years had had right inguinal hernia. Otherwise his antecedents from a medical point of view were excellent. On the day before his illness he had what he regarded as a satisfactory movement of the bowels. That night he ate heartily of clam-chowder and strawberries. The next afternoon he felt some abdominal discomfort. Later, while taking a bath, he found his hernia was down (as he had taken the truss off), and he found more difficulty than usual in replacing it. That night he vomited a great many times, the first vomitus suggesting strawberries, and he had great abdominal pain, diffuse, not localized. At 4 the next morning, when seen for the first time, he was not collapsed. The tongue was moist, with a slight white coat. Temp. 98.4, Pulse 60, Resp. 14. The abdomen was soft, not tender. The hernia was found to be perfectly reduced. Nothing abnormal was felt per anum. The pain required an injection of  $\frac{1}{2}$  grain morphia. Nausea was so troublesome that the

patient refused even bits of ice. Nothing whatever passed the bowels. On the second day the vomiting became stercoraceous. On the third day the vomiting persisted. Temp. 98.5, Pulse 68. Large enemata ( $5\frac{1}{2}$  quarts) had been given three times without apparent benefit. The belly was distended, rather hard, not tender. In the right side an ill-defined resistance seemed to be felt, corresponding to the ascending colon. A consultation was now called. What would have been your diagnosis, prognosis, and treatment?

---

OPHTHALMOLOGY. — Professor H. W. WILLIAMS.

1. How does Bright's disease affect the eyes?
  2. What are the symptoms of paralysis of the third pair of nerves?
  3. Describe iritis and its consequences.
  4. Describe trachoma and the changes it causes on the eyeball.
  5. What are the symptoms of ophthalmia neonatorum?
- 

OTOLOGY. — Professors BLAKE and J. O. GREEN.

1. Describe the anatomy of the sound-conducting mechanism of the middle ear.
  2. What is the function of the tensor tympani muscle?
  3. Diagnostic signs, subjective and objective, of simple acute inflammation of the middle ear.
  4. Causes and symptoms of serous effusions in the middle ear.
  5. Treatment of furuncular and of diffused inflammation of the external auditory canal.
- 

DISEASES OF THE NERVOUS SYSTEM. — Dr. J. J. PUTNAM.

1. Describe fully the "reaction of degeneration"; and the proper method of testing for it; and explain its diagnostic significance.
2. Indicate the general character of the disorders of sensibility [as regards distribution] from lesions:
  - (a) of the peripheral nerves;
  - (b) of the plexuses;
  - (c) of the spinal cord, exclusive of the nerve-roots;
  - (d) of the internal capsule;
  - (e) of the cortex cerebri.
3. Describe fully the symptomatology, etiology, differential diagnosis, and course of "Multiple Neuritis."
4. Describe the symptoms and pathology of syphilis of the nervous system.
5. What is the reparative power of:
  - (a) the peripheral nerves;
  - (b) the brain;
  - (c) the spinal cord [white and gray matter].

6. Give the differential diagnosis of sciatica and the diseases which might be mistaken for it.

7. Give the treatment in full [constitutional, symptomatic, local, and surgical] for localized pain, sciatica for instance.

[As many questions may be answered as the student has time for, but it is especially desired that the answers should be full and accurate.]

---

### DISEASES OF CHILDREN. — Assistant Professor ROTCH.

I. What are the most common congenital lesions of the circulatory apparatus to be looked out for in the first 2 weeks of life?

II. The diagnosis of Icterus Neonatorum, and at what time of life does this condition occur?

III. At what time and age would you wean?

IV. At what time and age would you vaccinate?

V. Describe a case of Congenital Syphilis and give the treatment appropriate to the stage of the disease.

VI. The diagnosis and treatment of Cholera Infantum.

---

### MENTAL DISEASES. — Dr. FISHER.

1. Give the two grand divisions of the German system of classification with all the forms you remember.

2. Describe hysteria and its varieties.

3. Describe epileptic insanity.

4. What are the characteristics of paranoia?

5. Give Sankey's scheme of the development of ordinary insanity.

6. Describe the stages of general paralysis.

---

### GYNAECOLOGY. — Professor BAKER.

1. State all you are able in description of eighteen means which may be employed in perfecting a diagnosis of uterine disease.

2. Give the anatomy of the vagina.

3. What is the difference between retroversion and retroflexion of the uterus, and what do you understand by retrocession of the uterus?

4. Is the orifice of the vulvo-vaginal gland outside or inside the hymen? and state the significance which this orifice possesses in performing the secondary operation for laceration of the perineum.

5. Which finger should be especially educated in practising vaginal touch? stating the reasons for any preference.



**Fourth Year's Studies.**

## GYNAECOLOGY. — Professor BAKER.

1. Name the ligaments of the uterus and describe their location and structure.
  2. Describe the method of applying both cervical and vaginal tampon in a case of uterine hemorrhage, giving details of position of patient, materials used, etc., etc.
  3. What would be your treatment of a case of chronic cervical endometritis?
  4. Give the anatomy of the vagina.
  5. What is the difference between retroversion and retroflexion of the uterus, and what do you understand by retrocession of the uterus?
  6. Is the orifice of the vulvo-vaginal gland outside or inside the hymen? and state the significance which this orifice possesses in performing the secondary operation for laceration of the perineum.
  7. Which finger should be especially educated in practising vaginal touch? stating the reasons for any preference.
- 

## DERMATOLOGY. — Professor WHITE.

1. Describe the clinical varieties of erythema.
  2. Treatment of eczema.
  3. What is impetigo contagiosa?
  4. What are the forms of cutaneous tuberculosis?
  5. Description of leprosy.
- 

## OTOLOGY. — Professors BLAKE and J. O. GREEN.

1. Describe the anatomy of the sound-conducting mechanism of the middle ear.
2. What is the function of the tensor tympani muscle?
3. Diagnostic signs, subjective and objective, of simple acute inflammation of the middle ear.
4. Causes and symptoms of serous effusions in the middle ear.
5. Treatment of furuncular and of diffused inflammation of the external auditory canal.
6. Describe the complications and consequences of suppurative inflammation of the middle ear.
7. Describe the origin, insertion, position, innervation, and function of the stapedius muscle.
8. What anatomical structures are endangered in the operation of opening the mastoid process and what precautions are necessary to avoid them?
9. Describe the course of the facial nerve and its relations to the auditory nerve, the internal and the middle ear.

## LARYNGOLOGY. — Professor KNIGHT.

1. What is the usual difference in appearance between the ulceration due to tuberculosis and that due to syphilis in the larynx?

2. To what is dysphagia in laryngeal tuberculosis due, and what would you do to relieve it?

3. What are the more common appearances in the larynx on attempted phonation in a case of "nervous" or functional aphonia?

4. What may cause paralysis of the left recurrent laryngeal nerve? of the right?

What effect does paralysis of one recurrent laryngeal nerve have upon the vocal cord of that side? What is the appearance of the glottis in quiet respiration, and on phonation?

5. Symptoms of hypertrophy of the adenoid tissue at the vault of the pharynx. Methods of removal?

## DISEASES OF CHILDREN. — Assistant Professor ROTCH.

I. Describe typhoid fever as it occurs in young children.

II. Give the differential diagnosis between and the prognosis of the cerebral paralysis of children and poliomyelitis anterior acuta.

III. The symptoms and treatment of acute pericarditis, with the differential diagnosis from dilated heart.

IV. Chronic hydrocephalus: its symptoms and prognosis.

## DISEASES OF THE NERVOUS SYSTEM.

Drs. PUTNAM and WALTON.

Answer five questions, including one of the last two.

1. Reaction of degeneration.

2. Significance of disordered knee-jerk.

3. Impaired motion of an extremity: to what may it be due, and how distinguish?

4. Varieties of headache and their significance.

5. Etiology: symptoms and course of multiple neuritis.

6. Symptoms, course, and prognosis of paralysis agitans.

7. Differential diagnosis in the following case: A farmer, aged 21, has had pneumonia and scarlet fever, but otherwise has enjoyed good health. There is no history of syphilis, alcoholism, or exposure, but he has indulged in feats that taxed his physical strength. Two years ago he had slight stiffness of the back, which lasted several months. After that he had an illness, probably a mild typhoid. A year ago, while in good health, he was attacked with vomiting, which persisted for twenty-four hours. The attack began about noon, and by ten o'clock he began to have pain

across the hips, and the left leg began to be weak. The next day the leg was almost powerless, and the right leg began to fail. By the second day there was complete paralysis. Nausea and pain in the stomach lasted a few days. For ten days there was retention of urine. There has been a little pain in the back and legs, and considerable acidity, eructations of gas, and distress after eating. He is quite costive. There is absolute paralysis of the legs from the hips down, with considerable general wasting. The legs are cold; there is some venous stasis. The sensibility in all forms is normal. There is slight tenderness over the nerve trunks in the arms and legs. The muscles of the legs and lower abdomen do not react to faradism. The plantar reflex and knee jerk are lost.

8. Diagnosis and treatment of the following case, supplying symptoms to be looked for:—

A young lady of twenty, with no special family or previous history, beyond having been always rather delicate, was confined to the bed four months ago for five weeks with an attack of which we have no history beyond a pulse of 120, a slight rise of temperature, and pain and soreness in the arms. This was followed by a rapidly increasing weakness of the hands. At present she cannot extend the first phalanges on either hand, though she can straighten the ends of the fingers and spread them. There is some atrophy of the extensors, which do not react to faradism. The supinator longus reacts to faradism, and responds to the will. There is no loss of sensation.

---

#### CLINICAL OBSTETRICS.—Professor W. L. RICHARDSON.

1. What are the signs and symptoms of the death of the foetus in utero during the seventh month? Treatment?

2. A patient is confined early in the seventh month. What is the prognosis as regards the child? What would be your treatment as regards the child during your attendance on the case?

3. A primipara, five months pregnant, falls while getting out of a carriage. Shortly after labor pains begin, and on your arrival, two hours later, you find the os one half dilated, and the membranes, which are bulging, rupture during your examination, and the cord becomes prolapsed. The head presents. The pains are frequent and strong. Treatment?

4. What are the symptoms of internal haemorrhage occurring during the ninth month? There are no signs of labor. Treatment?

5. A primipara has given birth to a still-born child. The third day the breasts are found to be enlarged, tender, and somewhat painful. How would you manage this feature of the case?

6. During the third day after a normal confinement the lochia, which have been profuse, suddenly cease. The patient complains somewhat of pain over the uterine region, and the uterus is slightly tender on pressure, and enlarged. The temperature has risen one degree. The pulse is normal. Diagnosis? Treatment?

7. Treatment of after-pains?

8. Prophylaxis and treatment of ophthalmia neonatorum?

## OPERATIVE SURGERY. — Professor PORTER.

1. Give the rules for ligature of the Common Carotid.
2. “ “ “ “ “ “ Popliteal.
3. “ “ “ “ “ “ Posterior Tibial high.
4. “ “ “ “ “ “ Femoral at Hunter's Canal.
5. Describe excision of lower jaw.
6. “ enucleation of the eye.
7. “ Tracheotomy.
8. “ amputation of the penis.
9. “ “ at the knee joint.
10. “ the operation for Trephining.

## LEGAL MEDICINE. — Professor DRAPER.

1. Give the differential diagnosis of ecchymoses and cadaveric lividities.
2. What is the nature of the contract between physicians and their patients, and what degree of skill and care does the law exact under this contract?
3. Give some examples of death by suffocation and the post-mortem appearances common to them all.
4. What appearance in an adult skeleton may help to determine (*a*) the sex and (*b*) the personal identity of the individual?
5. What conditions in their associated operation favor the rapid development of putrefaction?
6. Describe the principle of the spectroscope and its application to the identification of blood in a suspected stain.

## BACTERIOLOGY. — Dr. ERNST.

1. What are bacteria, and how are they classified from a medical point of view?
2. What are the especial advantages of solid over fluid culture media?
3. Describe as fully as possible the method of isolation of several species of bacteria, the one from the other.
4. What are the common reagents and the method of applying them in the detection of bacteria in morbid tissues?

## ADMISSION EXAMINATION PAPERS.

## LATIN.

TRANSLATE : —

## EPAMINONDAS.

Ad hanc corporis firmitatem plura etiam animi bona accesserant. Erat enim modestus, prudens, gravis, temporibus sapienter utens, peritus belli, fortis manu, animo maximo; adeo veritatis diligens ut ne joco quidem mentiretur; idem continens, clemens patiensque admirandum in modum; non solum populi sed etiam amicorum ferens injurias; . . . studiosus audiendi, ex hoc enim facillime disci arbitrabatur. Itaque cum in circulum venisset, in quo de republica disputaretur, aut de philosophia sermo haberetur, nunquam inde prius discessit quam ad finem sermo esset adductus.

## PHYSICS.

1. Define centre of gravity. What is meant by stable and unstable equilibrium?
2. Define: tenacity, ductility, malleability.
3. Diffusion of gases.
4. What circumstances affect the intensity of sound?
5. Upon what does the boiling-point of a liquid depend?
6. Conduction of heat. Convection.
7. What is meant by refraction of light?
8. Describe the Leyden jar.
9. Mention some of the properties of a magnet. Effect of breaking a magnet?
10. Define electrolysis. What are electro-positive, and electro-negative elements?

## FRENCH.

I. TRANSLATE : —

La première nuit fut délicieuse. La mer était calme comme un lac encaissé dans les montagnes de la Suisse. Les phares<sup>1</sup> seuls nous montraient la côte. Ils pâlessaient devant la légère colonne de feu qui s'élançait du cratère de Vésuve. Pendant que le pêcheur jetait et tirait le filet, et que l'enfant, à moitié endormi laissait vaciller sa torche, nous donnions de temps en temps une faible impulsion à la barque, et nous écoutions avec ravissement les gouttes sonores de l'eau, qui ruisselaient de nos rames, tomber harmonieusement dans la mer comme des perles dans un bassin d'argent.

Nous étions en pleine mer; le sommeil nous gagnait. Nous nous couchâmes sous nos bancs, à côte de l'enfant. Le pêcheur étendit sur nous la lourde voile pliée au fond de la barque. Nous nous endormîmes ainsi entre deux lames bercés par le balancement insensible d'une mer qui faisait à peine incliner le mât. Quant nous nous reveillâmes, il était grand jour.

Un soleil étincelant moirait le mer de rubans de feu et se réverbérait sur les maisons blanches d'une côte inconnue. Une légère brise, qui venait de cette terre, faisait palpiter la voile sur nos têtes et nous poussait d'anse en anse et de rocher en rocher. C'était la côte dentelée et à pec de la charmante île d'Ischia, que je devais tant habiter et tant aimer plus tard. Elle m'apparaissait pour le première fois, nageant dans la lumière, sortant de la mer, se perdant dans le bleu du ciel, et éclosé comme d'un rêve de poète pendant le léger sommeil d'une nuit d'été.

<sup>1</sup> *lighthouse.*

II. Write a short description, in French, of some familiar object or subject.

### GERMAN.

TRANSLATE:—

“Ich sage Dir aber, Deine Person wird den guten Leuten gar nicht unangenehm sein; ich stehe Dir dafür. Du kennst die Gesellschaft nicht und denkst Dir Alles viel zu schwer. Es ist Mangel an Herren. Ich gelte etwas bei der Frau vom Hause—sie hat mich gebeten einige junge Männer meiner Bekanntschaft mitzubringen. Sieh die Gesellschaft, wie anziehend sie ist. Was ist diese Tanzstunde—es ist bloss ein Verein junger Leute zu dem Du eingeladen bist. Tanzen? Ja! damit Du Deine Waden verbesserst; ach! komm doch und ob Du eine junge Comtesse oder ein Bürgermädchen in der Polka herumführst—das kann Dir einerlei bleiben.”

“Ich gehe doch nicht,” antwortete Anton. “Es will mir gar nicht recht gefallen.”

### ALGEBRA.

[Leave all the work.]

1. Give the numerical value of the following expression when  $a = 13$ ,  $b = 4$ ,  $c = 3$ ,  $d = 7$ :  $(a - b)^2 (c + d)^2$ .

2. Multiply  $a^2 + 2x$  by  $(a - 2x)^2$ .

3. Divide  $\frac{3}{a-b}$  by  $\frac{3}{a+b}$ .

4. A merchant sold at one time 3 pairs of boots and 4 pairs of shoes for \$17, and at another time 7 pairs of boots and 13 pairs of shoes for \$47; what was the price of each?

5. Mr. A had some money; Mr. B paid him two dollars. A found one dollar, and then had one fourth as much as B had left. How much did they each have at first?

### GEOMETRY.

1. Show how to construct a triangle equivalent to a given square.

2. Define a parallelogram; a chord; a trapezoid; a polygon: a scalene triangle.

3. The perpendiculars erected at the middle points of three sides of a triangle meet in a point.

4. A straight line cannot intersect a circle at more than two points.

5. Two triangles are equal when a side and two adjacent angles of one are equal to a side and two adjacent angles of the other.

6. A straight line perpendicular to the radius at its extremity is a tangent to the circle.

---

### BOTANY.

1. With how many species of wild flowers in your own neighborhood are you familiar?

Mention the botanical names and families of two or three peculiar to that neighborhood and ten (10) which are widely distributed through the United States.

2. Mention and describe some of the important plants (not necessarily indigenous) in the following orders: Leguminosae, Compositae, Liliaceae, Euphorbiaceae.

3. Describe the parts of a flower and their uses.

4. Describe the process of fertilization in plants.

(a) Phaenogamous,

(b) Cryptogamous.











