

University of Chicago Library

# Guide to the University of Chicago Department of Mathematics Records 1892-1975



© 2008 University of Chicago Library

## **Table of Contents**

Descriptive Summary	3
Information on Use	3
Access	3
Citation	3
Historical Note	3
Scope Note	4
Related Resources	4
Subject Headings	5
INVENTORY	5
Series I: Correspondence, 1931-1938	5
Series II: Administrative Records, Course Material and Writings, 1892-1975	13
Series III: Lecture Notes, 1894-1910	16

## Descriptive Summary

<b>Identifier</b>	ICU.SPCL.MATHDEPT
<b>Title</b>	University of Chicago. Department of Mathematics. Records
<b>Date</b>	1892-1975
<b>Size</b>	31 linear feet (15.5. boxes)
<b>Repository</b>	Special Collections Research Center University of Chicago Library 1100 East 57th Street Chicago, Illinois 60637 U.S.A.

**Abstract** The Department of Mathematics was founded with the University of Chicago, with coursework beginning in October 1892. The records of the University of Chicago's Department of Mathematics span the years 1894-1975, with a concentration of material documenting the department's early development from the 1890s-1930s. The collection contains correspondence, reports, biographical writings, publications, lecture notes, and other material related to administration, research and teaching in the department.

## Information on Use

### Access

Open for research. No restrictions.

### Citation

When quoting material from this collection, the preferred citation is: University of Chicago. Department of Mathematics. Records, [Box #, Folder #], Special Collections Research Center, University of Chicago Library

### Historical Note

The Department of Mathematics was founded with the University of Chicago, with coursework beginning in October 1892. Early faculty included Oskar Bolza and Heinrich Maschke, appointed by department chair Eliakim Hastings Moore. The department was instrumental in organizing an international congress of mathematicians during the 1893 World's Fair, and later the American Mathematical Society. Early graduates of the department included influential mathematicians such as Gilbert Ames Bliss, Oswald Veblen, George D. Birkhoff and Robert Lee Moore. Beginning in the early twentieth century, the department granted a huge number of Ph.D.s - far more than any of its nearest competitors, leading to criticism of the quality of the program and its graduates. That many of these graduates went on to faculty positions

contributed to a perception that scholarship and research in the department was complacent and overly narrow.

Attempts to diversify and improve the quality of faculty, students and programs began under the administration of Gilbert A. Bliss, who succeeded Moore as chair of the department in 1927. The department continued to struggle, due in part to the demands of World War II, until Marshall Stone was brought in from Harvard to restructure and strengthen mathematics research at the university. Important faculty appointments during this time included Saunders Mac Lane, who went on to chair the department from 1952-1958.

## **Scope Note**

The records of the University of Chicago's Department of Mathematics span the years 1894-1975, with a concentration of material documenting the department's early development from the 1890s-1930s. This collection is divided into three series.

Series I: Correspondence, contains administrative memoranda and letters from 1931-1938, primarily incoming and outgoing correspondence of the department secretary, and of department chair Gilbert A. Bliss. The correspondence is arranged by year, then alphabetically by correspondent. It is important to note that the names given in the inventory do not represent all correspondents, but the beginning and end of the alphabetical range in each folder. Correspondents include faculty, prospective and current students, university administrators, and researchers at other institutions. Additional administrative correspondence from the year 1929 is found in Series II.

Series II: Administration, Course Material and Writings, includes a variety of material spanning the years 1892-1975. The correspondence, reports, course material, writings, and other documents in this series represent several administrative periods of the department, beginning with Eliakim Hastings Moore and ending with meeting materials collected by Saunders Mac Lane in the 1970s. This series contains research material, drafts and reprints for several biographical writings about early faculty, composed around the 1930s-1940s.

Series III: Lecture Notes, contains student notebooks for courses taught by faculty such as Oskar Bolza, Harris Hancock, Heinrich Maschke, George Abram Miller, Eliakim Hastings Moore, J.W.A. Young, Forest Moulton, Kurt Laves, Leonard Dickson, Howard Mitchell, and Gilbert A. Bliss. Spanning the years 1894-1910, this series documents teaching and student work conducted early in the department's history. Some of the lecture notes relate to astronomy courses, rather than mathematics. The notes are organized by student note-taker, with the names of courses and lecturers given when identified. Among the many students included, the best represented are Benjamin Luce Remick, Arthur Dunn Pitcher (Ph.D. 1911), and E.B. Skinner.

## **Related Resources**

The following related resources are located in the Department of Special Collections:

<http://www.lib.uchicago.edu/e/spl/select.html>

Albert, Abraham Adrian. Papers

Mac Lane, Saunders. Papers

Mathematical Club. Records

Moore, Eliakim Hastings. Papers

Wilczynski, Ernest J. Papers

### **Subject Headings**

- Bliss, Gilbert Ames, 1876-1951
- Bolza, O. (Oskar), 1857-1942
- Dickson, Leonard E. (Leonard Eugene), 1874-
- Hancock, Harris, 1867-1944
- Mac Lane, Saunders
- Maschke, H. (Heinrich), 1853-1908
- Miller, G. A. (George Abram), 1863-1951
- Moore, Eliakim Hastings, 1862-1932
- Moulton, Forest Ray, 1872-1952
- Pitcher, Arthur Dunn
- Remick, Benjamin Luce
- Skinner, E.B.
- University of Chicago. Department of Mathematics
- Mathematics-Study and teaching (Higher)
- Mathematics-Study and teaching
- Mathematicians

### **INVENTORY**

#### **Series I: Correspondence, 1931-1938**

##### **Box 1**

##### **Folder 1**

Walter Adams - Irene Bassett, 1931

##### **Box 1**

##### **Folder 2**

Donald P. Bean - J. H. Butchart, 1931

##### **Box 1**

##### **Folder 3**

L. L. Caldwell - Edgar E. DeCou, 1931

##### **Box 1**

**Folder 4**

Pierre Deltour - W. W. Elliot, 1931

**Box 1**

**Folder 5**

Wilhelm Engelman - E. E. Githens, 1931

**Box 1**

**Folder 6**

J. W. Glover - Ralph A. Hefner, 1931

**Box 1**

**Folder 7**

Rollin D. Hemens - Charles H. Judd, 1931

**Box 1**

**Folder 8**

L. C. Karpinski - Jacob Levitski, 1931

**Box 1**

**Folder 9**

Florence P. Lewis - Katherine Mann, 1931

**Box 1**

**Folder 10**

M. Marden - F. W. Owens, 1931

**Box 2**

**Folder 1**

Clarence Ross - Zens L. Smith, 1931

**Box 2**

**Folder 2**

Fred W. Sparks - Marjorie Tyler, 1931

**Box 2**

**Folder 3**

U.S. Immigration Authorities - A. Winteritz, 1931

**Box 2**

**Folder 4**

Robert C. Woellner - Zeuch, 1931

**Box 2**

**Folder 5**

John R. Abernethy - G. Bol, 1932

**Box 2**

**Folder 6**

C. S. Boucher - Carus Chemical Company, 1932

**Box 2**

**Folder 7**

W.B. Carver - Nelson Dunford, 1932

**Box 2**

**Folder 8**

G. H. Estabrooks - Margaret Gregson, 1932

**Box 2**

**Folder 9**

Howard D. Grossman - Mark H. Ingraham, 1932

**Box 2**

**Folder 10**

Henry James - Mona Lyons, 1932

**Box 3**

**Folder 1**

Lee H. McFarlan - R. L. Moore, 1932

**Box 3**

**Folder 2**

Harry Morris - Albert W. Raab, 1932

**Box 3**

**Folder 3**

William Rae - Ewing C. Scott, 1932

**Box 3**

**Folder 4**

Henry Schultz - Edwin W. Titt, 1932

**Box 3**

**Folder 5**

Charles C. Torrance - A. A. Zielinski, 1932

**Box 3**

**Folder 6**

A. Adrian Albert - Perry M. Best, 1933

**Box 3**

**Folder 7**

Severin R. Beyma - John W. Bradshaw, 1933

**Box 3**

**Folder 8**

Ruth Bright - L. G. Cleverdon, 1933

**Box 3**

**Folder 9**

Comitato di Redazione, 1933

**Box 3**

**Folder 10**

H. S. Everett - M. Frechet, 1933

**Box 3**

**Folder 11**

M. G. Gaba - Henry G. Gale, 1933

**Box 4**

**Folder 1**

H. A. Giddings - Harris Hancock, 1933

**Box 4**

**Folder 2**

Anna M. Hanson - C. F. Huth, 1933

**Box 4**

**Folder 3**

C. F. Huth - Mary E. Irwin, 1933

**Box 4**

**Folder 4**

Dunham Jackson - F. A. Lewis, 1933

**Box 4**

**Folder 5**

Fred D. Lindsey - George S. Monk, 1933

**Box 4**

**Folder 6**

A. G. Montgomery - C. A. Peerenboom, 1933

**Box 4**

**Folder 7**

E. B. Penrod - R. G. D. Richardson, 1933

**Box 4**

**Folder 8**

F. K. Riehtmyer - Hermann I. Schlesinger, 1933

**Box 4**

**Folder 9**

Iso Schoenberg - Walter Snyder, 1933

**Box 4**

**Folder 10**

Brian Sparks - Kate L. Turabian, 1933

**Box 4**

**Folder 11**

Marjorie Tyler - Zenkers, 1933

**Box 5**

**Folder 1**

Edith Abbott - Merle L. Bishop, 1934

**Box 5**

**Folder 2**

R. W. Bixler - Jane Chasnoff, 1934

**Box 5**

**Folder 3**

Harold Chatland - B. M. DeBeck, 1934

**Box 5**

**Folder 4**

Foster L. Dennis - Theo M. Focke, 1934

**Box 5**

**Folder 5**

H. C. Foyer - Walter R. Griffin, 1934

**Box 5**

**Folder 6**

Lois Griffiths - E. V. Huntington, 1934

**Box 5**

**Folder 7**

C. C. Hurd - Mark H. Ingraham, 1934

**Box 5**



**Folder 8**

Nathan Jacobson - Wallace Lamoreux, 1934

**Box 5**

**Folder 9**

H. G. Landau - Roberta McCann, 1934

**Box 5**

**Folder 10**

Saunders MacLane - E. J. Moulton, 1934

**Box 5**

**Folder 11**

F. D. Murnagham - H. O'Connor, 1934

**Box 5**

**Folder 12**

Nick Oehlberg - Rainard B. Robbins, 1934

**Box 6**

**Folder 1**

M. S. Robertson - Jesse B. Schreiter, 1934

**Box 6**

**Folder 2**

Henry Schultz - James D. Sword, 1934

**Box 6**

**Folder 3**

B. G. Teubner - Preston T. Vance, 1934

**Box 6**

**Folder 4**

Oswald Veblen - Robert C. Woellner, 1934

**Box 6**

**Folder 5**

(Young)-Woodbridge - William H. Zeigel, 1934

**Box 6**

**Folder 6**

Leon Alaoglu - Frances E. Baker, 1935

**Box 6**

**Folder 7**

Ross H. Bardell - E. R. Breslich, 1935

**Box 6**

**Folder 8**

J. N. Brown - Alexander Cook, 1935

**Box 6**

**Folder 9**

Byron Cosby II - William Findlay, 1935

**Box 6**

**Folder 10**

Russell R. Fleharty - Hester H. Graham, 1935

**Box 6**

**Folder 11**

Lawrence M. Graves - F. L. Henderson, 1935

**Box 6**

**Folder 12**

M. R. Hestenes - Daniel B. Hutton, 1935

**Box 6**

**Folder 13**

Mark H. Ingraham - William Kurzon, 1935

**Box 6**

**Folder 14**

Gordon J. Laing - Walter Lyche, 1935

**Box 7**

**Folder 1**

W. J. McConnell - E. J. Moulton, 1935

**Box 7**

**Folder 2**

E. D. Mouzon - N. C. Plimpton, 1935

**Box 7**

**Folder 3**

Thomas I. Porter - Ralph M. Robinson, 1935

**Box 7**

**Folder 4**

David Rome - H. F. Smith, 1935

**Box 7**

**Folder 5**

Benjamin J. South - Edwin W. Titt, 1935

**Box 7**

**Folder 6**

Joseph C. Trainor - G. C. Webber, 1935

**Box 7**

**Folder 7**

Mary Evelyn Wells - John William Zimmer, 1935

**Box 7**

**Folder 8**

L. J. Adams - Samuel Beatty, 1936

**Box 7**

**Folder 9**

Charlton T. Beck - Arthur Burks, 1936

**Box 7**

**Folder 10**

W. D. Cairns - Ralph D. Dorsett, 1936

**Box 7**

**Folder 11**

J. Doudera - Mary A. Fulkerson, 1936

**Box 7**

**Folder 12**

Arthur S. Gale - G. M. Graves, 1936

**Box 8**

**Folder 1**

Ernestine J. Green - M. R. Hestenes, 1936

**Box 8**

**Folder 2**

T. H. Hildebrandt - William J. Jaffe, 1936

**Box 8**

**Folder 3**

R. D. James - W. Isaac Layton, 1936

**Box 8**

**Folder 4**

T. H. Lee - Paul E. Martin, 1936

**Box 8**

**Folder 5**

Ruth Mason - Ivan Niven, 1936

**Box 8**

**Folder 6**

William V. Noe - F. S. Nowlan, 1936

**Box 8**

**Folder 7**

R. E. O'Connor - A. E. Pitcher, 1936

**Box 8**

**Folder 8**

L. C. Plant - R. G. D. Richardson, 1936

**Box 8**

**Folder 9**

Phillip Richman - Zens Smith, 1936

**Box 8**

**Folder 10**

F. J. Soeffing - Yuan-Yung Tseng, 1936

**Box 8**

**Folder 11**

Frederick A. Valentine - G. C. Webber, 1936

**Box 8**

**Folder 12**

Eugene Weiss, Sr. - Herbert S. Zuckerman, 1936

**Box 8**

**Folder 13**

L. Alaoglu - Wilfred H. Baker, 1937

**Box 8**

**Folder 14**

R. W. Barnard - M. G. Boyce, 1937

**Box 9**

**Folder 1**

Paul P. Boyd - Elbert H. Clarke, 1937

**Box 9**

**Folder 2**

Arthur B. Coble - H. T. Davis, 1937

**Box 9**

**Folder 3**

E. E. DeCou - Roy C. Fisher, 1937

**Box 9**

**Folder 4**

Lyman R. Flook - R. G. Green, 1937

**Box 9**

**Folder 5**

F. L. Griffin - E. R. Hedrick, 1937

**Box 9**

**Folder 6**

Olaf Helmer - Kiyoshi Iseki, 1937

**Box 9**

**Folder 7**

Rosa Lea Jackson - Joseph H. Levin, 1937

**Box 9**

**Folder 8**

Leonid Levitsky - Paul Miller, 1937

**Box 9**

**Folder 9**

H. H. Mitchell - F. W. Owens, 1937

**Box 9**

**Folder 10**

Charles N. Page - Meyer H. Resnikoff, 1937

**Box 9**

**Folder 11**

R. J. Reynolds - Paul H. Seymour, 1937

**Box 10**

**Folder 1**

Seymour Sherman - C. E. Van Horn, 1937

**Box 10**

**Folder 2**

Oswald Veblen - Helen Zerr, 1937

**Box 10**

**Folder 3**

Lucille Abbee - Julia Wells Bower, 1938

**Box 10**

**Folder 4**

Fannie Boyce - E. W. Burgess, 1938

**Box 10**

**Folder 5**

Helen A. Butcher - Nancy Cole, 1938

**Box 10**

**Folder 6**

A. H. Compton - Daniel M. Dribin, 1938

**Box 10**

**Folder 7**

William L. Duren, Jr. - Morris Friedman, 1938

**Box 10**

**Folder 8**

Aline H. Frink - Harriet Griffin, 1938

**Box 10**

**Folder 9**

June Grimm - George C. Helme, 1938

**Box 10**

**Folder 10**

Olaf Helmer - C. F. Huth, 1938

**Box 10**

**Folder 11**

M. H. Ingraham - E. P. Lane, 1938

**Box 11**

**Folder 1**

J.F. Locke - John Matheson, 1938

**Box 11**

**Folder 2**

Margaret Mauch - Morris Neiburger, 1938

**Box 11**

**Folder 3**

David L. Netzorg - Harriet Rees, 1938

**Box 11**

**Folder 4**

Reid - M.F. Smiley, 1938

**Box 11**

**Folder 5**

David Eugene Smith - Morris Tepper, 1938

**Box 11**

**Folder 6**

J.C. Thurman - Oswald Veblen, 1938

**Box 11**

**Folder 7**

Marvin Volpel, Roland W. Ziege, 1938

**Series II: Administrative Records, Course Material and Writings,  
1892-1975**

**Box 11**

**Folder 8-11**

Fellowships and scholarships, 1930-1936

**Box 11**

**Folder 12**

Navigation course records, 1912-1927

**Box 11**

**Folder 13**

Student placement, 1944-1945

**Box 12**

**Folder 1-3**

Oskar Bolza, celebration of 50th anniversary of his attainment of the Ph.D., 1936

**Box 12**

**Folder 4**

Oskar Bolza, "Aus Meinen Leben," autobiographical excerpt, 45 pages, ca. 1936

**Box 12**

**Folder 5**

Eliakim Hastings Moore, death and memorial service

**Box 12**

**Folder 6**

Eliakim Hastings Moore, biographical manuscripts

**Box 12**

**Folder 7**

Eliakim Hastings Moore

- Bibliography, 1885-1900
- G.A. Bliss, biographical writings, 1933-1936

**Box 12**

**Folder 8**

Eliakim Hastings Moore, portrait fund

**Box 12**

**Folder 9**

Eliakim Hastings Moore, list of recipients of General Analysis

**Box 12**

**Folder 10-11**

Herbert Ellsworth Slaught, death and memorial services

**Box 12**

**Folder 12**

Herbert Ellsworth Slaught

- Biographical material
- G.A. Bliss, biographical writing

**Box 12**

**Folder 13**

Herbert Ellsworth Slaught, memorial articles

**Box 12**

**Folder 14**

Ernest Julius Wilczynski, illness and death, 1927-1942

**Box 12**

**Folder 15**

Ernest Julius Wilczynski, biographical writing by Ernest P. Lane, 1930

**Box 12**

**Folder 16**

Development campaign, 1924-1926

**Box 13**

**Folder 1-5**

University of Chicago 50th anniversary celebration, correspondence, 1940-1941

**Box 13**

**Folder 6-9**

American Mathematical Society and Mathematical Association of America, meetings and colloquia, 1933-1941

**Box 13**

**Folder 10**

Mathematical Association of America, Committee on Educational Testing, correspondence, 1933-1935

**Box 13**

**Folder 11**

Mathematical Association of America, Committee on Educational Testing, report to the Board of Trustees of the Pittsburgh meeting, 1934

**Box 13**

**Folder 12**

Mathematical Association of America, Committee on Educational Testing, offprints and reports

**Box 14**

**Folder 1-5**

Encyclopaedia Britannica, correspondence, 1944-1946

**Box 14**

**Folder 6**

Encyclopaedia Britannica, "Calculus, Differential and Integral," typescript

**Box 15**

**Folder 1**

Lists of courses, instructors and enrollments, 1892-1924

**Box 15**

**Folder 2**

Survey of research in progress, 1974-1975

**Box 15**

**Folder 3-5**

Saunders Mac Lane, departmental meeting minutes, 1952-1970

**Box 15**

**Folder 6-7**

Correspondence, 1929

**Box 16**

**Folder 1-7**

Correspondence, 1929

**Box 17**

**Folder 1**

Correspondence, 1929

**Box 17**

**Folder 2-7**

Gilbert Ames Bliss, reprints, ca. 1900s-1930s

**Box 18**

**Folder 1-3**

Gilbert Ames Bliss, reprints, ca. 1900s-1930s

**Box 18**

**Folder 4-5**

Gilbert Ames Bliss, Eliakim Hastings Moore memorial, research material, correspondence and writings, 1930-1933

**Box 18**

**Folder 6**

List of courses, instructors and students, 1894-1903

**Series III: Lecture Notes, 1894-1910**

**Box 19**

Benjamin Luce Remick, Introduction to Function Theory, Math 23, Prof. Oskar Bolza, Autumn 1894

**Box 19**

Benjamin Luce Remick, notes on Quaternions, Math 21, O. Bolza, Autumn 1894

**Box 19**

Benjamin Luce Remick, Hyperelliptic Functions, Math 56, O. Bolza, Summer 1897

**Box 19**

Benjamin Luce Remick, Invariants I, Math 51, O. Bolza, Winter 1897

**Box 19**

Benjamin Luce Remick, Invariants II, Math 52, O. Bolza, Winter 1898

**Box 19**

Benjamin Luce Remick, Theory of Abstract Groups, Math 59 I & II, O. Bolza, Summer 1899

**Box 19**

Benjamin Luce Remick, Abstract Groups III per DeCou, copy of notes taken by Edgar Ezeikiel DeCou, 1899, O. Bolza, Autumn 1899

**Box 20**

Benjamin Luce Remick, Calculus of Variations, Math 23A, Prof. Harris Hancock, Spring 1895

**Box 20**

Benjamin Luce Remick, Higher Plan Curves, Math 16, Prof. Heinrich Maschke, Autumn 1894

**Box 20**

Benjamin Luce Remick, Analytic Mechanics, Math 13, H. Maschke, Spring 1895

**Box 20**

Benjamin Luce Remick, Algebraic Surfaces, Math 17, H. Maschke, Spring 1895

**Box 20**

Benjamin Luce Remick, (Weierstrass's Theory of) Elliptic Functions, Math 24, H. Maschke, Winter 1895

**Box 20**

Benjamin Luce Remick, Modern Analytical Geometry, Math 53, H. Maschke, Autumn 1896

**Box 20**



Benjamin Luce Remick, Higher Plan Curves, Math 55, H. Maschke, Winter 1897

**Box 21**

Benjamin Luce Remick, Function Theory I & II (Theory of Functions) Math 47, H. Maschke, Winter 1897

**Box 21**

Benjamin Luce Remick, Algebraic Surfaces, Math 57, H. Maschke, Spring 1897

**Box 21**

Benjamin Luce Remick, Linear Differential Equations, Math 54, H. Maschke, Spring 1898

**Box 21**

Benjamin Luce Remick, Elliptic Functions, H. Maschke, Spring 1897

**Box 22**

Benjamin Luce Remick, Seminar on Permutation Groups, Prof. George Abram Miller, Summer 1898

**Box 22**

Benjamin Luce Remick, Projective Geometry, Math 36, Prof. Eliakim Hastings Moore, Autumn 1896

**Box 22**

Benjamin Luce Remick, (Theory of) Numbers, Math 61, E. H. Moore, Autumn 1897

**Box 22**

Benjamin Luce Remick, General Arithmetic I, Math 62, E. H. Moore, Winter 1898

**Box 22**

Benjamin Luce Remick, General Arithmetic II, Math 63, E. H. Moore, Spring 1898

**Box 22**

Benjamin Luce Remick, Theory of Numbers, Math 61, J. W. A. Young, Summer 1900

**Box 23**

Theory of Elliptic Functions, lectures by Oskar Bolza, undated

**Box 23**

Walter Wilson Hart, Calculus of Variations, lectures by Oskar Bolza, undated

**Box 24**

Howard Hawks Mitchell, Course 323, Analytic Theory of Numbers, 1927

**Box 24**

W.V. Lovitt, Integral Equations, lectures by Oskar Bolza, 1913

**Box 24**

H.E. Jordan, Theory of Numbers, lectures by Leonard Eugene Dickson, 1902

**Box 25**

Frank D. Frazer, Twisted Curves and Surfaces, lectures by Heinrich Maschke, 1902

**Box 25**

Oswald Veblen and others, Advanced Integral Calculus, lectures by Eliakim Hastings Moore, Autumn 1900.

**Box 25**

Definite Integrals, lectures by Eliakim Hastings Moore, ca. 1901

**Box 26**

Arthur Dunn Pitcher, Differential Equations From the Standpoint of Lie, Gilbert A. Bliss, Summer 1908

**Box 26**

Arthur Dunn Pitcher, Theory of Functions of a Real Variable, Oskar Bolza, Summer 1906

**Box 26**

Arthur Dunn Pitcher, Theory of Functions of a Complex Variable, Vols. I and II, Oskar Bolza, Summer 1909

**Box 27**

Arthur Dunn Pitcher, Theory of Functions of a Complex Variable, Vols. I and II, Oskar Bolza, Winter 1910

**Box 27**

Arthur Dunn Pitcher, Projective Geometry, Vols. I and II, Heinrich Maschke, Summer 1906

**Box 27**

Arthur Dunn Pitcher, General Analysis, With Application to Differential Equations, E. H. Moore, 1908-1909

**Box 28**

Arthur Dunn Pitcher, Integral Equations in General Analysis, E. H. Moore, 1908- 1910

**Box 28**

Arthur Dunn Pitcher, Analytical Mechanics, Forest Ray Moulton, Autumn and Winter, 1908-1909

**Box 28**

Arthur Dunn Pitcher, Differential Equations with Application to Celestial Mechanics, Forest Ray Moulton, 1909-1910

**Box 29**

**Folder 1-2**

E.B. Skinner, lectures by Oskar Bolza, 1899

**Box 29**

**Folder 3**

E.B. Skinner, lectures by Heinrich Maschke, 1899-1900

**Box 29**

**Folder 4**

E.B. Skinner, unidentified, 1899

**Box 29**

**Folder 5**

E.B. Skinner, mathematics and astronomy lectures by Heinrich Maschke and Kurt Laves, 1899

**Box 29**

**Folder 6**

E.B. Skinner, notes on Weber's Algebra, Vol. II, 1899

**Box 29**

**Folder 7**

E.B. Skinner, lectures by Oskar Bolza, 1900

**Box 29**

**Folder 8**

E.B. Skinner, ca. 1900

**Box 29**

**Folder 9-10**

E.B. Skinner, Differential Geometry, lectures by Heinrich Maschke, 1900

**Box 30**

**Folder 1**

E.B. Skinner, Differential Geometry, lectures by Heinrich Maschke, 1900

**Box 30**

**Folder 2-4**

E.B. Skinner, Celestial mechanics courses, lectures by Forest Ray Moulton, 1900

**Box 30**

**Folder 5-6**

E.B. Skinner, Linear Homogeneous Differential Equations, lectures by Heinrich Maschke, 1900

**Box 30**

**Folder 7-8**

E.B. Skinner, Weierstrass theory courses, lectures by Heinrich Maschke, 1900

**Box 30**

**Folder 9**

E.B. Skinner, Modern Analytical Geometry, lectures by Heinrich Maschke, 1900

**Box 30**

**Folder 10**

E.B. Skinner, Problem of Three Bodies, lectures by Forest Ray Moulton, 1900

**Box 30**

**Folder 11**

E.B. Skinner, ca. 1900

**Box 31**

**Folder 1-6**

E.B. Skinner, ca. 1900

**Box 31**

**Folder 7**

E.B. Skinner, Calculus of Variations, lectures by Oskar Bolza, 1900

**Box 31**

**Folder 8**

C.C. MacDuffee, Synthetic Projective Geometry, lectures by Ernest J. Wilczynski

**Box 31**

**Folder 9**

C.C. MacDuffee, Function Theory, lectures by Gilbert A. Bliss, 1920-1921

**Box 31**

**Folder 10**

Oswald Veblen, Advanced Integral Calculus, lectures by Eliakim H. Moore