

MS-64 Aeronautical Training Schools Collection

Collection Number: MS-64

Title: Aeronautical Training Schools Collection

Dates: 1917-1919, 1925

Creators: American School of Aviation (Chicago, Ill.)
National Aero Institute (Chicago, Ill.)

Summary/Abstract: Contains lesson booklets, examination papers, correspondence, advertising, and lectures from two early correspondence schools involved in teaching aviation: The National Aero Institute and the American School of Aviation.

Quantity/Physical Description: 0.7 linear feet

Language(s): English

Repository:

Special Collections and Archives, Paul Laurence Dunbar Library, Wright State University, Dayton, OH 45435-0001, (937) 775-2092

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Preferred Citation:

[Description of item, Date, Box #, File #], MS-64, Aeronautical Training Schools Collection, Special Collections and Archives, University Libraries, Wright State University, Dayton, Ohio.

Acquisition: The collection of 1917-1919 American School of Aviation materials in Series I, was purchased from Hamill & Barker, Antiquarian Booksellers in Chicago, IL, circa 1985. No provenance is available for the 1925 course materials from the American School of Aviation, nor the National Aero Institute materials in Box 2.

Processed by: The original processor is unknown. The finding aid consisted of an inventory.

Revisions: In 2011, The 1925 American School of Aviation Bulletin and Lessons 1-50 from the American School of Aviation were added to the collection. In 2017, the collection level finding aid was written according to DACs by Toni Vanden Bos.

Arrangement:

The collection is arranged into two series:

- I. American School of Aviation, 1917-1918, 1925
- II. National Aero Institute, 1917

Historical Note

The American School of Aviation was located in Chicago, Illinois and offered a complete correspondence course in practical aeronautics. The advisory staff of the school consisted of Lester V. Bratton, Chief Instructor; Raoul Hofmann, M.E., winner of the Grand Prix Vienna in 1909; Tracy F. Brackett, M.E. of Designer Brackett Rotary Engine; Archie F. Keating, licensed pilot #873; and R.P. Markus, Aero Club of Illinois. The school was located at 431 South Dearborn Street in Chicago in 1918. Lester V. Bratton continued as chief instructor through at least 1925.

The American School of aviation was listed in the "College and Private School Directory of the United States and Canada", Vol. 13, 1922 with the following entry:

"This school provides practical instruction in aeronautics; course has been prepared and arranged especially for men who without leaving home wish to avail themselves of the opportunities in the airplane industry; our course in practical aeronautics has received the highest endorsement of famous aviators, eminent aeronautical engineers and leading airplane manufacturers."

The National Aero Institute was also located on South Dearborn Street in Chicago, Illinois, but at address 538. Both the American School of Aviation and the National Aero Institute advertised nationally in periodicals such as *Popular Science Monthly* to recruit students and also recruited students through commission based employment.

Scope and Content

The collection documents early long distant course offerings for learning the basics of aeronautics and mechanical aeronautics through materials from the American School of Aviation and the National Aero Institute based in Chicago Illinois in the early 20th century. The collection is arranged into two series: Series I. American School of Aviation, and Series II. National Aero Institute.

Series I., American School of Aviation, contains two sets of course materials from the correspondence courses offered by the school at the time. The 1917-1919 course materials from the "Complete Course in Practical Aeronautics" were owned by Lawrence M. Blakey of Auburn, Illinois, who enrolled at the age of 18. As listed in the enrollment application, the complete course included twenty-five lessons covering the science of practical aeronautics, and the designing and construction of aeroplanes, ten lectures prepared by prominent aviators and aeroplane builders delivered monthly, twenty blue prints showing technical and constructional details of aeroplanes, six bulletins containing information on current events and suggestions to simplify the course reading, and twenty-five exams based on the course materials, which were returned with grades and comments. These materials except for the blueprints are all included in

the collection. The second set of course materials consists of the lessons for the “Complete Course in Practical Aviation”, copyrighted in 1925, and the “American School of Aviation Bulletin”, Vol. X, No. 1-7.

Series II. National Aero Institute contains a complete set of 53 lessons used in the “Complete Mechanics of Aviation” course, dated 1917. The lessons are arranged in numerical order.

Subject Terms:

Persons

Bratton, Lester V.

Blakey, Lawrence M., 1900-1985

Organizations/Corporate Names

American School of Aviation (Chicago, Ill.)

National Aero Institute (Chicago, Ill.)

Places

Chicago (Ill.)

Subjects

Aircraft industry – Vocational guidance – United States

Aeronautics, Commercial – Vocational guidance

Aeronautics – Study and teaching

Collection Inventory

<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
Series I:		American School of Aviation	
1	1	Lessons 1-5 Complete Course in Practical Aeronautics: 1. The Invention of Lighter-Than-Air Machines 2. Early Types of Heavier-Than-Air Machines 3. The Development of the Airplane 4. The Air In Which We Fly 5. Gravity and the Part It Plays In Aeronautics	1918
1	2	Lessons 6-10 Complete Course in Practical Aeronautics: 6. Various Types of Flying Machines 7. How the Airplane Flies 8. How the Resistance of the Air Affects Flat Surfaces 9. The Different Pressures which Cause an Airplane Wing to the Left 10. Why Curved Surfaces are Used for Aeroplane Wings	1918
1	3	Lessons 11-15 Complete Course in Practical Aeronautics: 11. The Characteristics of an Airplane 12. Airplane Wings 13. Wing Designing 14. How to Calculate Horsepower for Airplanes 15. The Necessary Qualities of an Airplane	1918
1	4	Lessons 16-20 Complete Course in Practical Aeronautics: 16. What to Use in Airplane Construction 17. The Construction of Ribs for Airplane Wings 18. Airplane Wing Construction 19. How to Construct the Controlling Surfaces 20. How to Make the Body and Landing Gear	1918
1	5	Lesson 21-25 Complete Course in Practical Aeronautics: 21. How to Cover Airplane Wings and Control Surfaces 22. How to Design and Build Propellers 23. Motors Which May be Used in Airplanes 24. How to Assemble an Airplane 25. The Upkeep and Repairing of Airplanes	1918
1	6	Lectures for Complete Course in Practical Aeronautics: The Study of Aviation The Story of the Heavens The Story of the Zeppelin How to Build and Operate Balloons Principles of Airplane Design	1918

<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
1	7	Lectures for Complete Course in Practical Aeronautics: The Art of Flying Aeronautical Wireless Telegraphy Our Modern Airplanes Airplanes in the Great War by Tom W. Bencist The Law of the Air	1918
1	8	Supplementary Publications and Offers: Data Sheets for Various Wing Curves <u>General Review</u> by Ernest L. Jones, Editor "Aeronautics" Dictionary of Aeronautical Terms and Phrases, prepared for the exclusive service of the students in the American School of Aviation as a part of its course in Practical Aeronautics Original application for enrollment in the American School of Aviation Two catalogs of "Practical Electrical and Automobile Books for Home Study" issued by the school Broadside titled "Do You Want to Make Money – soliciting people to act as agents for the school" Announcement for a flying model airplane – Lawrence Military Tractor The American School of Aviation Bulletin, Vol. II, No. 1	1917- 1918
1	9	22 letters, consisting of 30 pages, 14 of the letters are signed by the officers of the school. These are letters in response to questions by the students and letters with comments on the exams and happenings at school. Most are form letters.	1918 - 1919
1	10	Examination Papers 1-25 taken by student, Lawrence M. Blakely. Note: the last three exams were not completed.	1918
2	1	American School of Aviation Bulletin, Vol. X, No. 1-7	1925
2	2	Lessons 1-20 for Complete Course in Practical Aviation: 1. Opportunities in the Aviation Industry 2. Things That Cause and Hinder Motion 3. Mechanical Principles in Aviation 4. Why an Airplane Flies 5. The Forces that Propel an Airplane	1925

<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
		<ul style="list-style-type: none"> 6. The Wind Tunnel and What it has Taught Us 7. How an Airplane is Made Stable 8. How the Motions of an Airplane are Controlled 9. The Structural Principles of the Airplane 10. The Fuselage and How It Is Built 11. How Hulls and Pontoons are Constructed and Their Use 12. How Landing Gears are Constructed 13. Wing Designing 14. How Airplane Wings are Constructed 15. How Control and Stabilizing Surfaces are Made 16. The Properties and Uses of Airplane Woods 17. The Value and Selection of the Different Woods Used on Airplane Construction 18. The Properties and Uses of Airplane Metals 19. Airplane Wires and Their Uses 20. How to Make Wire Loops and Terminals 	
2	3	<p>Lessons 21-50 for Complete Course in Practical Aviation:</p> <ul style="list-style-type: none"> 21. Airplane Fabrics and How They are Used 22. How to Cover a Wing with Fabric 23. Airplane Finishes and How They are Used 24. How to Uncrate and Assemble an Airplane 25. How to Align an Airplane for Flight 26. How the Internal Combustion Engine Works 27. The Construction and Operation of Airplane Engines 28. The Care and Inspection of Propellers 29. Installing and Inspecting the Airplane Engine 30. Construction and Operation of the Liberty Motor 31. Leading Types of Airplane Motors 32. The Position Instruments of an Airplane 33. The Condition Instruments of an Airplane 34. How to Inspect the Airplane Motor 35. How to Inspect the Airplane Before Flight 36. The Designing of Airplanes 37. Different Types of Speed Planes 38. The Design of Heavy Duty Airplanes 39. The JN4B Tractor Biplane 40. Special Types of Airplanes 41. Why Altitude and Speed Mean Safety in Flying 42. The Correct Method of Making an Airplane Take-Off 43. Inspecting the Airplane While Flying 44. How the Weather Affects Flying 45. The Air in Which We Fly 46. The Operation of Balloons, Dirigibles and Zeppelins 47. Laying Out a Cross-Country Flight 	1925

<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
		48. How to Read an Air Map 49. The Law of the Air 50. The Value of a General Review	
Series II:		National Aero Institute – Mechanics of Aviation	
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
2	4	Forward – A personal word from the Chief Instructor of the National Aero Institute Lessons 1-5 Complete Course of Study in the Mechanics of Aviation: 1. The Study of Air 2. The Balance of the Airplane 3. Controls and Power Plant 4. Definitions of Aeronautical Terms 5. Early History of Aeronautics	1917
2	5	Lessons 6-10 Complete Course of Study in the Mechanics of Aviation: 6. Development of Aeronautics 7. Successful Flying 8. Types of Aircraft 9. “Lighter than Air Machines” 10. Graphs	1917
2	6	Lessons 11-15 Complete Course of Study in the Mechanics of Aviation: 11. Primary Principles of the Gas Engine 12. Multiple Cylinder Engines 13. Types of Cylinders and Valve Arrangements 14. Revolving Cylinder Engine 15. Ignition and Carburetion	1917
2	7	Lessons 16-20 Complete Course of Study in the Mechanics of Aviation: 16. Engine Mounting 17. Early Air-craft Engines 18. Development of Aircraft Engines 19. “American Aircraft Engines” 20. European Air Craft Engines	1917
2	8	Lessons 21-25 Complete Course of Study in the Mechanics of Aviation: 21. Lubrication and Cooling of Air Craft Engines 22. “Dynamics of the Gas Engine” 23. Properties of the Air 24. Aerodynamics No. 1 25. Aerodynamics No. 2	1917
2	9	Lessons 26-30 Complete Course of Study in the Mechanics of Aviation:	1917

<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
		26. "Resistance of Bodies" 27. "Aerofoil Curves No. 1" 28. "Aerofoil Curves No. 2" 29. "Aerofoil Curves No. 3" 30. Airplane Forces and Balance by Harlan D. Fowler	
2	10	Lessons 31-35 Complete Course of Study in the Mechanics of Aviation: 31. Performance Calculation No. 1 32. Performance Calculation No. 2 33. Wing Design by Bud Morris 34. Control Surfaces by Harlan D. Fowler 35. Body Design by Harlan D. Fowler	1917
2	11	Lessons 36-40 Complete Course of Study in the Mechanics of Aviation: 36. Landing Gear by Harlan D. Fowler 37. Simple Stresses by Christopher Crowell 38. Wing Stresses by Christopher Crowell 39. Body and Landing Gear Stressed by Christopher Crowell 40. Propeller Design by Raoul Hofmann	1917
2	12	Lessons 41-45 Complete Course of Study in the Mechanics of Aviation: 41. Stability by Harlan D. Fowler 42. Stabilizing Devices 43. Operation of Controls 44. Materials of Construction No. 1 45. Materials of Construction No. 2	1917
2	13	Lessons 46-53 Complete Course of Study in the Mechanics of Aviation: 46. Wing Construction No. 1 by Raoul Hofmann 47. Wing Construction No. 2 by Raoul Hofmann 48. Body Construction No. 1 by Raoul Hofmann 49. Body Construction No. 2 by Raoul Hofmann 50. Landing Gear Construction 51. Control Construction 52. Instruments 53. Late Developments in Aviation by John A. Tenney	1917