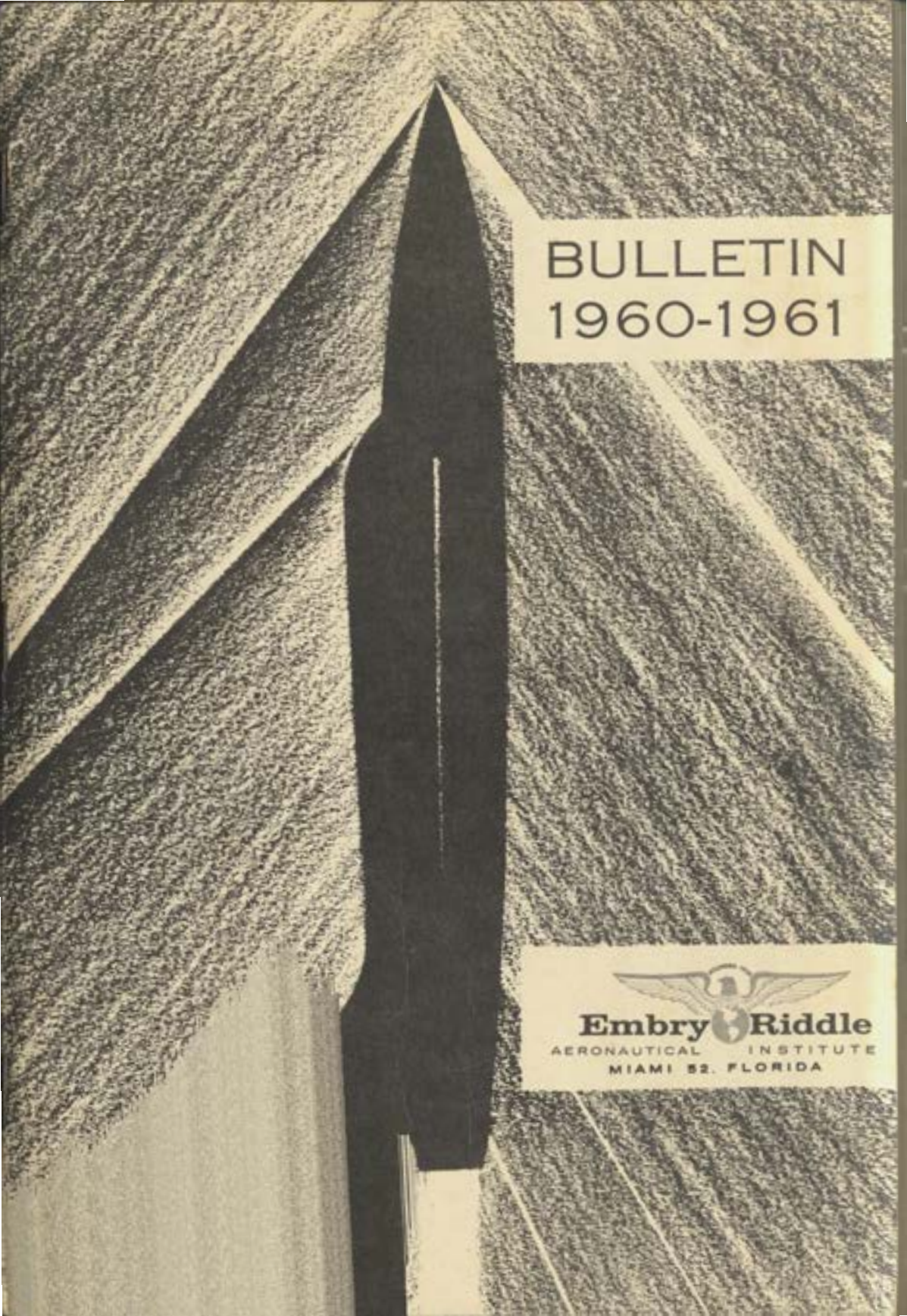
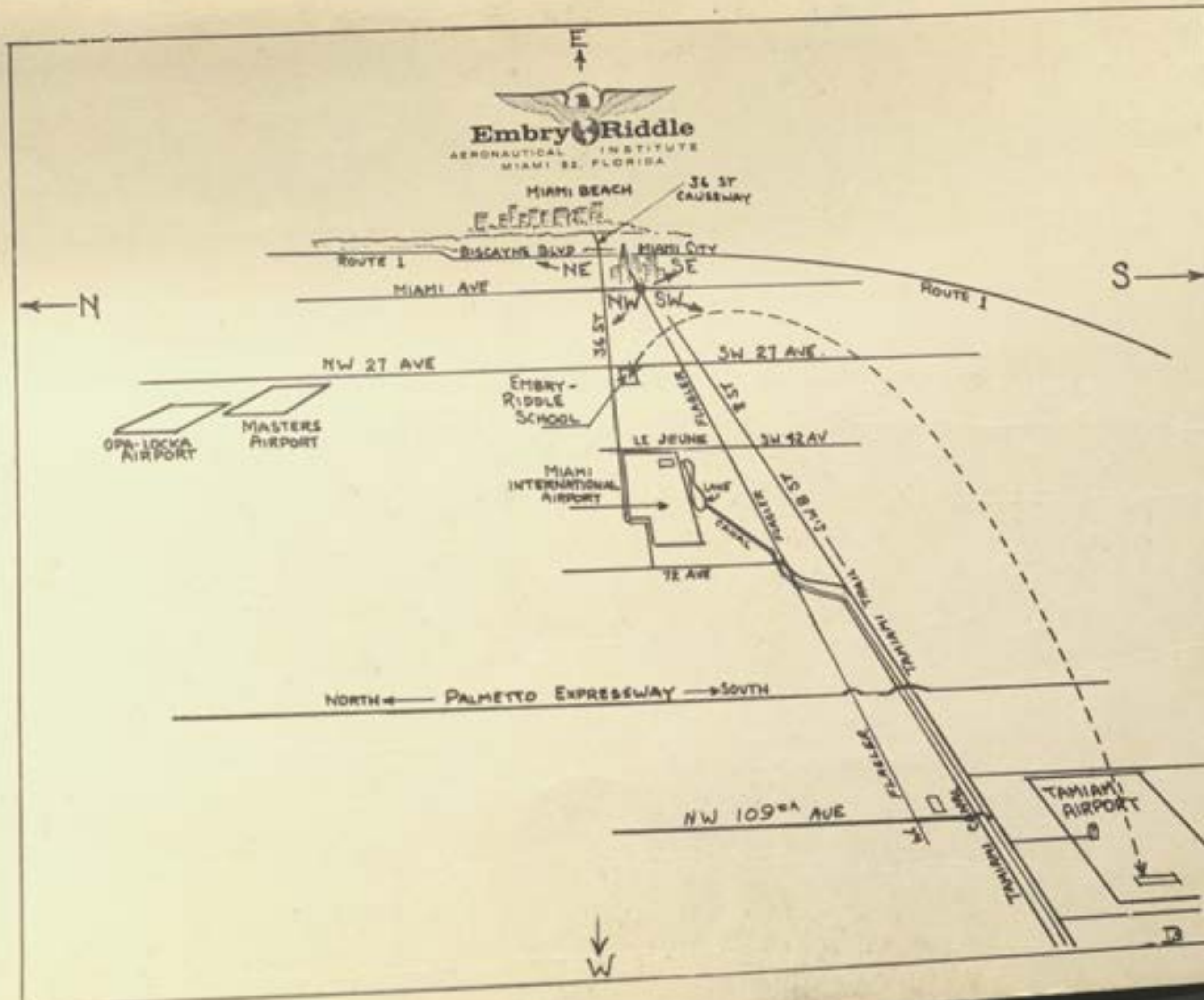


BULLETIN
1960-1961

Embry Riddle
AERONAUTICAL INSTITUTE
MIAMI 52, FLORIDA



E
Embry Riddle
AERONAUTICAL INSTITUTE
MIAMI 32, FLORIDA
MIAMI BEACH
36 ST CAUSEWAY
BISCAYNE BLVD
MIAMI CITY
ROUTE 1
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NW
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MIAMI AVE
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ROUTE 1
36 ST
NW 27 AVE
SW 27 AVE
EMBRY-RIDDLE SCHOOL
OPA-LOCKA AIRPORT
MASTERS AIRPORT
FLAGLER
8 ST
LE JEUNE
SW 42 AV
MIAMI INTERNATIONAL AIRPORT
LAKE
CANAL
FLAGLER
S.W. 8 ST
72 AVE
TAMIAMI TRAIL
NORTH ← PALMETTO EXPRESSWAY → SOUTH
FLAGLER
NW 109th AVE
TAMIAMI CANAL
TAMIAMI AIRPORT
W

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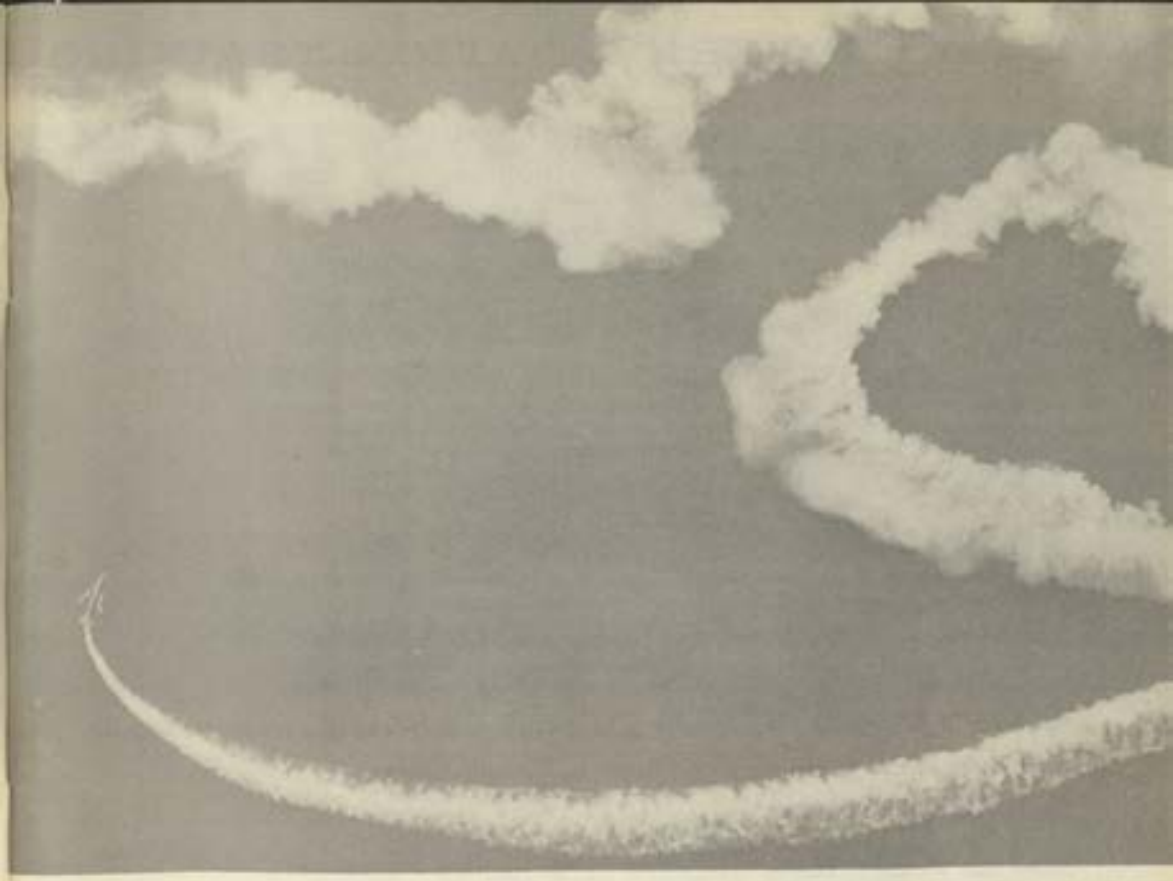
YOUR BRIGHT FUTURE IN AVIATION

Today's exciting aviation-era and the unlimited future of æronautics offer young men with inquisitive minds—and a *good specialized higher education*—richly rewarding opportunities that were not even dreamed of just a few years ago.

Aviation is both a *defense* and a *civilian* industry that desperately needs well-trained men, in all its branches. Young men, fresh out of high school who plan now for their necessary training, will be America's future leaders in every phase of aviation. They'll shape the nation's supremacy in the air. They'll fashion rewarding careers for themselves. Aeronautics is one field where initiative and ideas are respected... where opportunities keep a man's enthusiasms alive... where each day brings a challenge.

Question any leader in aviation and he will tell you that an "Embry-Riddle man" is a thoroughly trained man. Men in key positions know of the school's honored traditions ... that since it was founded in 1926 at Cincinnati, Ohio, it has contributed greatly to the nation's need for trained men... that Embry-Riddle enjoys highest governmental honors and awards... that it is approved by the U. S. Civil Aeronautics Administration, the National Council of Technical Schools, the State of Florida and is authorized for training by the Veterans' Administration.



OPPORTUNITY UNLIMITED!

The aviation industry has become America's largest employer. It offers higher financial rewards, faster advancement, and greater security than any other field. The need for skilled and trained minds is ever increasing. There are not enough qualified men to fill the multiplicity of positions.

Yet leaders of the industry know that aviation is on the threshold of greater achievement. So stop and think seriously. Consider aviation in relation to yourself. Its opportunities will be ready for you when you are!

MODERN AVIATION TRAINING

Embry-Riddle is located in the shadow of the world's largest airport and commercial aircraft maintenance base—the Miami International Airport with five square miles devoted to the handling of an enormous volume of air traffic by approximately 50 different carriers.

This close association with the every-day activities of modern air transportation is an ideal environment for air-minded Embry-Riddle students. In fact, hundreds of Embry-Riddle graduates have stepped directly from the classroom into the great shops of Pan American World Airways, National, Delta, Capital Airlines and others.

More than 20,000 technicians, engineers and specialists are employed by the various airlines and air-related industries located at Miami International Airport. Their total annual payroll is about $85,000,000. The mild climate throughout the year permits 75% of all maintenance and overhaul work to be done outside of hangars.

Miami International Airport is the nation's second busiest airport. On the average, a plane either takes-off or lands every 90 seconds around the clock. In Miami, contact flying weather exists 97% of the time, a condition unequalled at any other major city. Surely, this amazing overall record is convincing proof of the outstanding advantages of Miami as the training ground for an aviation career!

IN A MODERN AVIATION-MINDED CITY

INTERNATIONALLY RESPECTED.. TOP RATED

Embry-Riddle is an internationally-respected, top rated æronautical institute of character and integrity. It has had time to develop and mature and has kept pace with the changing and expanding requirements of the aircraft industry. Its curricula is the cumulative result of constant vigilance, pioneering and up-grading. Its physical facilities are of the best. Its laboratory equipment and fleet of aircraft are of the most modern type. Its staff of supervisors and instructors combine the utmost competency and exceptional experience — for which there are no substitutes. Its students come from all parts of the United States, as well as from Europe, Asia and Latin-American countries. And its aim always has been and will continue to be: *maximum training in a minimum of time.*

Reference library

Student restaurant in Aviation Building.

Typical Bedroom In One of the Modern Dormitories

All Classrooms Are Air Conditioned

SCHOOL ADMINISTRATION

ISABEL McKAY . . . . . President
LEMUEL D. CARLTON . . Vice President and Director of Admissions
GEORGE E. McAULEY . . . . . Business Manager
HAROLD C. MALCOLM . . . . . Treasurer
CARMEN KEENE . . . . . Registrar
A. R. LOOMIS . . . . . Guidance Director
NORWOOD T. INGRAM . . . . . Student Counselor
HOMER C. ROBERTS . . Director Airframe and Powerplant Division
ROBERT M. CLAFLIN . . . Director Engineering Techlonogy Division
HAROLD DEGADO . . . . . Director Flight Division

FACULTY
ENGINEERING TECHNOLOGY DIVISION

CLAFLIN, Robert M. . . . . . **Director of Engineering Technology**
B.S. Mechanical Engineering, University of Michigan, 1936
Nuclear Energy ASEE-AEF Summer Institute — Penn State University and Argonne National Laboratory, 1959

BIONDO, Joseph W. . . . . . **Engineering Instructor**
A.S., Embry-Riddle Aeronautical Institure, 1959

BREESE, Edward Y. . . . . . **Engineering Instructor**
B.A., Princeton University, 1934

DUNCAN, James W. . . . . . **Engineering Instructor**
A.S., Embry-Riddle Aeronautical Institute, 1958

HOWARD, John B. . . . . . **Engineering Instructor**
B.S. Economics, Antioch College — M.A. Economics, University of Delaware

LOWERY, Reginald M. . . . . . **Engineering Instructor**
B.S., Aeronautical Engineering, Virginia Polytechnic Institute, 1952

McCARTHY, Olive . . . . . **Engineering Instructor**
B.A., Mathematics, Carleton College, 1917

McCLURE, James G. . . . . . **Engineering Instructor**
M.S., Aeronautical Engineering, A. & M. College of Texas, 1950
B.S., Aeronautical Engineering, A. & M. College of Texas, 1949

McGLATHERY, Richard D. . . . . . **Engineering Instructor**
B.S., Awarded by the U. S. Naval Academy, 1930

SELLS, Jackson T. . . . . . **Engineering Instructor**
M.S., Mathematics, University of Miami (Graduate School), 1951
B.S., E.E., Mech.-Elect. Engineering, Purdue University, 1952
B.S., Physics, University of Miami, 1946

WHITE, Jack J. . . . . . **Engineering Instructor**
B.S., Mathematics, University of Miami, 1949
B.A., Physics, University of Miami, 1952

ZAHN, Paul D. . . . . . **Engineering Instructor**
B.S., Mathematics — American History, Columbia University, 1938

FACULTY

Airframe and Powerplant Technician Division

ROBERTS, Homer C. . . . . Director, A&P Division

Duquesne University; Pittsburgh Institute of Aeronautics — A&P Mechanic No. 99588; Ground Instructor No. 222464; FAA Designated A&P Mechanic; Examiner No. 2311.

ADKINS, Charlie R. . . . . Instructor, A&P Division

USAF Air University; Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1327660; Ground Instructor No. 1418045; Commercial Pilot No. 1308052; Flight Instructor CFI No. 1308052.

ALSDORF, Chester W. . . . . Instructor, A&P Division

College of Trades and Industry, La Crosse, Wis. — A&P Mechanic No. 294707; Ground Instructor No. 1151764; Private Pilot No. 1327724; Authorized Inspector No. 294707.

BLAKE, Thomas U. . . . . Instructor, A&P Division

Howard Payne College, Brownwood, Texas — A&P Mechanic No. 353464; Ground Instructor No. 130633; Airline Transport Pilot No. 40002; Flight Instructor No. CFI No. 40002.

CLOUSE, Claren M. . . . . Instructor, A&P Division

Bowling Green University; Toledo University.

CRIPPS, Wayne . . . . . Instructor, A&P Division

Michigan State; Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1435002; Commercial Pilot No. 1195146.

CURTIS, Stanley J. . . . . Instructor, A&P Division

Kent State University; Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1377830; Ground Instructor No. 1438340.

DAVIDSON, Leonard . . . . . Instructor, A&P Division

Boeing School of Aeronautics; Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1247741; Private Pilot No. 1237413; Ground Instructor No. 1248613; FAA Designated Mechanic Examiner No. 2310

FACULTY

Airframe and Powerplant Technician Division (Continued)

EAKEN, Ralph L. . . . . . **Instructor, A&P Division**

Case S.A.P.; R.C.A. Institute A.S. in Electrical Engineering — FAA A&P Mechanic No. 1166106; Private Pilot No. 604028.

HOFFMAN, Clarence C. . . . . . **Instructor, A&P Division**

A&P Mechanic No. 162745; Ground Instructor No. 1170538; FAA Designated A&P Mechanic Examiner No. 2316.

JOHNSON, Albert . . . . . **Instructor, A&P Division**

Mass. State Vocational School; Marine Corps Institute — Teachers Certificate; A&P Mechanic No. 11712; Ground Instructor No. 1160740; Commercial Pilot No. 542647; FAA Designated Mechanic Examiner No. 132.

KALLAHER, Joseph F. . . . . . **Instructor, A&P Division**

University of Miami — A&P No. 1263790; Private Pilot No. 1284530; Ground Instructor No. 456699.

LEHMANN, Karl . . . . . **Instructor, A&P Division**

A&P Mechanic No. 12079; Ground Instructor No. 22309; Teaching Certificate No. 366 (N. Y.); FAA Designated Mechanic Examiner No. 2177.

SMITH, Joseph H. . . . . . **Instructor, A&P Division**

Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1360306.

TITUS, Chandler P. . . . . . **Instructor, A&P Division**

CAA A&P Mechanic No. 1377549; Ground Instructor No. 1329716.

TRAUT, William A. . . . . . **Instructor, A&P Division**

Technical College, Ilmenau, Germany, B.S. in Mechanical Engineering

VERIGAN, Owen C. . . . . . **Instructor, A&P Division**

Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1105060; Ground Instructor No. 1061486.

WARWICK, John J. . . . . . **Instructor, A&P Division**

Embry-Riddle Aeronautical Institute — A&P Mechanic No. 1334679.

FACULTY
FLIGHT DIVISION

DELGADO, Harold . . . . . Director, Flight Division
Commercial — 447626
ASEL, AMEL Instrument
Flight Instructor — Airplane and Instrument
Examiner 213-11 (Private, Commercial, Multi-Engine C-45)

BURNSIDE, Donald L. . . . . Chief Instructor, Flight Division
Commercial — 1048794
ASEL, AMEL Instrument
Flight Instructor — Airplanes and Instrument

BONNANS, Robert P. . . . . Flight Instructor
Commercial — 1455681
Flight Instructor — Limited
ASEL

BYERLY, Edward N. . . . . Flight Instructor
Commercial — 1416767
ASEL Instrument
Flight Instructor — Limited

de LAGARDE, Richard H. . . . . Flight Instructor
Commercial — 1415324
Flight Instructor — Airplane
ASEL, AMEL

FETZER, Timothy R. . . . . Flight Instructor
ATR — 1367537
Flight Instructor
Instrument

McGREGOR, Elbert, H. . . . . Flight Instructor
ATR — 81235-41
ASEL, AMEL, ASES, AMES
Ground Instructor — 537525
Airframe and Powerplant — 1186853
Flight Instructor — Airplanes and Instrument

McKAY, John . . . . . Flight Instructor
Commercial — 1331484 . . . A & P 1367202
ASEL, AMEL Instrument
Flight Instructor — Airplane and Instrument

MIRGLE, Fred . . . . . Flight Instructor
Commercial — 14232-40
ASEL, AMEL
Flight Instructor — Airplane

SNYDER, Clarence O. . . . . Fligth Instructor
Commercial — 2828
ASEL, ASES, AMEL, AMES Instrument
Flight Instructor — Airplane and Instrument
A & P — 3195

TENNER, William . . . . . Flight Instructor
Commercial — 1429133
ASEL Instrument
Flight Instructor
A & P 1427227

WHITELEY, Donald . . . . . Flight Instructor
Commercial — 1298673
ASEL, AMEL Instrument
Flight Instructor — Airplanes and Instrument
A & P — 1398601

FLIGHT GROUND TRAINING AND LINK FACULTY

NESMITH, George A. . . . . Director, Link and Ground Training

FAA Certificate No. 1367920 — Link Trainer, Novigation Instructor, Meteorology Instructor, Radio Navigation Instructor andCAR Instructor
FAA Certificate No. 1370770 — Flight Navigator

AUMENT, John G. . . . . Link and Ground Training Instructor

FAA Certificate No. 1379026 — Link Instructor, Navigation Instructor, Meteorology Instructor, Radio Navigation Instructor and CAR Instructor

BROWN, Jeanette M. . . . . Link Instructor

FAA Certificate No. 1274855 — Link Instructor

CAMPBELL, William R. Jr. . . . Link and Ground Training Instructor

FAA Certificate No. 1442852 — Link Instructor, Radio Navigator Instructor, Civil Air Regulation Instructor, Meteorology Instructor

JENSEN, Harold E. . . . . Link and Ground Training Instructor

FAA Certificate No. 64973 — ATR Pilot, Commercial Pilot, ASEL, ASES, AMEL, AMES, Instrument Pilot, Instrument Instructor and Flight Instructor
FAA Certificate No. 1196989 — Link Instructor, Navigation Instructor, Meteorology Instructor, Radio Navigation Instructor, CAR Instructor and Airframe and Powerplant Instructor

ACCREDITATION

The Engineers' Council for Professional Development, at its annual meeting in St. Louis, during October, 1958, formally accredited Embry-Riddle Aeronautical Institute Program of Aeronautical Engineering Technology.

The Engineers' Council for Professional Development, a national accrediting body for engineering education, is a conference organized through the cooperation of the following national societies:

American Society of Mechanical Engineers
American Society of Civil Engineers
American Institute of Mining and Metallurgical Engineers
American Institute of Electrical Engineers
American Society for Engineering Education
American Institute of Chemical Engineers
Engineering Institute of Canada
National Council of State Boards of Engineering Examiners.

APPROVALS

All flight and mechanical courses are approved by the Federal Aviation Agency (C.A.A.).

Approved by the United States Department of Justice for the training of foreign students.

RECOGNITION

Recognized by the United States Office of Education.

Embry-Riddle Aeronautical Institute is recognized as an institution of higher education, being listed in the United States Office of Education Publication, "Accredited Higher Educational Institutions."

MEMBERSHIPS

Affiliate institutional member of the American Society for Engineering Education, National Council of Technical Schools, Aeronautical Training Society,

AERONAUTICAL ENGINEERING TECHNOLOGY PROGRAM

Accredited by

THE ENGINEER'S COUNCIL FOR PROFESSIONAL DEVELOPMENT (ECPD)

Why would a high school graduate who likes math and science be advised to enter a two year Institute of Engineering Technology to work for his Associate of Science Degree?

SHORTAGE OF ENGINEERING PERSONNEL — The President's Engineering Manpower Commission has emphasized the shortage of engineers at all levels. Facts indicate that a ratio of two or more Engineering Aides for every scientist or engineer would be desirable, so, if there is a shortage of engineers, there is an even greater shortage of Engineering Aides. This is reflected in the 100 per cent employment of our graduates and in the excellent starting salaries. Compare the 15,627 Engineering Aides graduated 1958-1959 from 206 Technical Institutes to the number of Engineers graduating with a BS and you will see that the shortage is becoming even more acute.

WHY A TWO YEAR ENGINEERING TECHNOLOGY COURSE? If a high school senior with aptitude in Math and Science has the money ($4,000 to $6,000 or more), the time, maturity, ability and the determination to complete a full 4 or 5 year Engineering Course, the B. S. Program is undoubtedly the best recommendation. However, over half of the Engineering College students drop out before graduation and there is nothing quite as nameless as those who would be engineers who have completed 1 to 3 years of a 4 year course. They have no diploma or other identification to show for their work, and what is more important, the country's engineering manpower pool has often lost another man of at least some engineering ability.

If there is a question on any of the above points, or if he might not complete the full 4 year course because he wants to get married, go to work, meet financial obligations, it would be much better that he take a two year course and receive an Associate of Science Degree for an ECPD accredited program in Engineering Technology. With this recognized degree he can get a job in industry at a good salary. Or, if he has been a good student and can financially afford to pass up the more than $10,000 he could undoubtedly earn in the next two years, he can go on to a university for his B. S. Degree, having acquired the maturity and good study habits necessary for success there.

AERONAUTICAL ENGINEERING TECHNOLOGY

PROGRAM (Continued)

WHY EMBRY-RIDDLE AERONAUTICAL INSTITUTE IN MIAMI? In early 1959 guidance counsellors in 30,000 schools throughout the country were sent copies of the following with supplementary requests financed by the President's Engineering Manpower Commission:

"TECHNICAL INSTITUTE PROGRAMS IN THE U. S. ACCREDITED BY ECPD"

"ACCREDITED CURRICULA LEADING TO FIRST DEGREES IN ENGINEERING"

"AFTER HIGH SCHOOL — WHAT?"

A study of the first will indicate that the Aeronautical Engineering Technology Program at Embry-Riddle is:

One of 5 ECPD accredited Aeronautical Engineering Technology courses in the U. S. (others are in Los Angeles, New York and Chicago.)

One of 36 Technical Institutes in U. S. with ECPD accredited courses of any kind.

Only ECPD accredited Engineering Technology Program in State of Florida.

We have found students settle down to serious study at Embry-Riddle. we have no fraternities or other distracting outside activities (except sunshine and the beaches) and we have a group of mature boys interested in serious study, thus encouraging a younger, less mature student to buckle down and work. It is interesting to follow a given student (some who did not have very good records before coming here) and see how his grades improve. To enter, a student must have a high school diploma, but if he did not take the Math and Science courses, we have a 16 weeks orientation course of Algebra, Plane Geometery, Trigonometry, Physics and English that prepare them for the first semester work. We give standard Algebra, Physics, English and Psychology tests to determine placement.

ADMISSION REQUIREMENTS

To be admitted to any course of study at Embry-Riddle, the applicant must possess a standard high school diploma or equivalent preparation.

Equivalent preparation must be evidenced, however, by satisfactory completion of G.E.D. (General Educational Development) tests or by other suitable criteria. The following special requirements apply as indicated:

Aeronautical Engineering Technology
Aeronautical Draftsman and Executive Pilot

Because of differences in High Schools, entering students will possess varying degrees of knowledge. For this reason, all entering students must take placement tests. The results of these tests will not be used as a basis for admission or rejection but for determination of proper academic placement level. When the scores in these placement tests indicate a need for a better educational foundation, students must complete certain orientation subjects at the Institute.

Bachelor of Science Degree In Aeronautical Engineering

Candidates for admission to the Bachelor of Science Degree Program must be graduates of accredited high schools with satisfactory records. Also, candidates for admission with advanced standing from colleges and universities or other institutions of higher education may be admitted.

Business Pilot

Embry-Riddle and The University of Miami will consider for admission to the Business Pilot course, graduates of accredited high schools, or of other accredited secondary schools, who have 16 high school units and a satisfactory high school record. High school graduates who rank in the lower half of their graduation class will be required to take the Scholastic Aptitude Test of the College Entrance Examination Board and to have their scores sent to the Division of Admissions at the University of Miami. This test is a general one intended to measure the student's ability to do college work. It requires no special preparation or study. Application to take the test must be made **not** to Embry-Riddle or the University of Miami but to the following address: College Entrance Examination Board. Box 592, Princeton, New Jersey.

ADMISSION REQUIREMENTS (Continued)

All Flight Courses

Applicant must have F.A.A. Class II Medical Certificate. (Name of F.A.A. approved doctor may be obtained from your nearest F.A.A. office.)

Applicants for Instrument Pilot Rating must possess current F.A.A. Commercial Pilot Certificate or possess a current Pilot Certificate with a minimum of 200 hours total time, at least 100 hours solo time and a minimum of 50 hours solo cross country time.

Applicants for an Instrument rating who have not completed the Embry-Riddle Commercial Pilot Ground Training must take an evaluation examination at the time of entrance to show that they have the proper background for admission to the course. Applicants failing this examination may be required to take additional Commercial Ground Training along with the Instrument Training in order to offset a knowledge deficiency.

Foreign Students

The credentials of an applicant from a foreign country are evaluated in accordance with the general regulations governing admission. An application, photograph and detailed transcripts of records should be submitted to the Director of Admissions several months in advance of the opening of the class in which the applicant seeks to gain admission. This will allow time for the exchange of necessary correspondence and documents relative to the securing of passports and visas for study in this counthy.

All foreign students must prepare themselves, prior to entering Embry-Riddle, to master the English language. Students must be capable of reading, writing, speaking and understanding English prior to admission.

STARTING DATES OF CLASSES

AUGUST 29, 1960

Aeronautical Draftsman
Aeronautical Engineering Technology
Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Executive Pilot
Instrument Pilot

SEPTEMBER 1, 1960

Business Pilot

SEPTEMBER 26, 1960

Commercial Pilot
Instrument Pilot

OCTOBER 24, 1960

Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Instrument Pilot

NOVEMBER 21, 1960

Commercial Pilot
Instrument Pilot

JANUARY 2, 1961

Aeronautical Draftsman
Aeronautical Engineering Technology
Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Executive Pilot
Instrument Pilot

JANUARY 30, 1961

Commercial Pilot
Instrument Pilot

FEBRUARY 1, 1961

Business Pilot

FEBRUARY 27, 1961

Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Instrument Pilot

MARCH 27, 1961

Commercial Pilot
Instrument Pilot

APRIL 24, 1961

Aeronautical Draftsman
Aeronautical Engineering Technology
Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Executive Pilot
Instrument Pilot

MAY 22, 1961

Commercial Pilot
Instrument Pilot

JULY 3, 1961

Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Instrument Pilot

JULY 31, 1961

Commercial Pilot
Instrument Pilot

AUGUST 28, 1961

Aeronautical Draftsman
Aeronautical Engineering Technology
Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Executive Pilot
Instrument Pilot

SEPTEMBER 1, 1961

Business Pilot

SEPTEMBER 25, 1961

Commercial Pilot
Instrument Pilot

OCTOBER 23, 1961

Airframe and Powerplant Technician
A & P Combined with Commercial Pilot
Commercial Pilot
Instrument Pilot

NOVEMBER 20, 1961

Commercial Pilot
Instrument Pilot

Multi-Engine Pilot course may be started at any time providing we have at least two weeks advance notice.

TUITION

AERONAUTICAL DRAFTSMAN

Full tuition, regular semester $280.00
(May be paid $70.00 in advance every 4 weeks)
(12 to 18 semester hours or 25 clock hours in Orientation, when required)

The cost of required books, equipment and supplies will not exceed $100.00.

AERONAUTICAL ENGINEERING TECHNOLOGY

Full tuition, regular semester $280.00
(May be paid $70.00 in advance every 4 weeks)
(12 to 18 semester hours or 25 clock hours in Orientation, when required)

Part-time: Per Semester Hour ..... $ 23.00

The cost of required books, equipment and supplies will not exceed $300.00 or an average of $50.00 per semester. Entering students should be prepared to spend more than this average for the first two semesters because of slide rule and drafting instrument purchases.

AIRFRAME AND POWERPLANT TECHNICIAN

$70.00 per 4 week instructional phase, in advance, total $1,120.00
Cost of books and supplies will not exceed $80.00.

A & P COMBINED WITH COMMERCIAL PILOT

The flight training portion of this course may be taken as follows:

1. The flight training may be started at the same time as the A & P training and completed at the same time. If this basis is chosen, the monthly tuition payments for the course will be $178.00 including A & P.
2. The flight training may be started at the same time as the A & P, and finish the flight training in a period of approximately ten months. If this basis is chosen, your payments will be as follows:
   a. First payment of $196.00
   b. Next seven payments of ..... $300.00 each*
   c. Last eight payments of ..... $ 70.00 each*
3. The A & P portion may be started alone and the flight training started after the six months of the A & P portion. On this basis, tuition payments will be as follows:
   a. First eight payments of ..... $ 70.00 each*
   b. Next payment of $196.00
   c. Last seven payments of ..... $300.00 each*

4. The entire A & P portion may be completed before the flight program begins. This will require approximately 24 months of training. On this basis, payments will be made in accordance with the A & P financial schedule followed by the regular Commercial Pilot payments schedule for the flight training.

It is not possible to hold any part-time employment, except week-end odd jobs, during the period of time that both the A & P and flight training courses are being taken. If some outside employment is necessary, it is suggested that the second or third basis listed above be considered. This will enable the student to work part-time during a six month period of his stay.

*The above figure applies to the MINIMUM amount normally needed to complete the Commercial Pilot Course. It is very possible that slightly more than this amount will be needed if flight aptitude warrants.

It is also possible that it may be desired to schedule more time in the higher horsepower aircraft, thereby raising the cost of the course as per information contained in the Commercial Pilot tuition schedule.

EXECUTIVE PILOT

Flight courses will be scheduled after the completion of the academic program. In special cases, and with the approval of the Director, flight training may be started prior to the completion of the academic program.

Tuition may be paid as follows:

a. First 8 payments of ..... $ 70.00
b. Last 16 payments of 205.00

Both the academic and mechanical portions of the course may be completed before starting any flight. This will require three years for completion of the Executive Pilot Course. Payments on this basis would be as follows:

a. First 24 payments of ..... $ 70.00
b. Last 12 payments of 180.00

The above figures apply to the MINIMUM flight tuition normally required for completion of the program. It is possible that this figure will be slightly higher if aptitude is such that the minimum flight time is insufficient.

The above figures do not include the necessary books, supplies and tools. Normal maximum for these items will be approximately $130.00.

It is not possible to hold any part-time employment during the period when flight and academic or flight and mechanical training are being pursued. If some outside employment is necessary, it is suggested that the 2nd or 3rd basis listed above be considered. This would enable a student to be employed for one year of the two year period.

BUSINESS PILOT

Embry-Riddle and Univerity of Miami:

First Semester	$1,100.00
Second Semester	1,150.00
Third Semester	1,360.00
Fourth Semester	1,990.00
Fifth, Sixth, Seventh and Eighth Semester, each	450.00

COMMERCIAL PILOT

	Minimum*	Maximum*
1. Primary trainers (65 h.p.)**		
Dual Instruction @ $10.00 per hour	$ 420.00	$ 520.00
Solo Instruction @ $8.00 per hour	752.00	784.00
2. Primary trainers (90 h.p.)**		
Instrument Instruction @ $12.00 per hour	60.00	72.00
Solo Instruction @ $10.00 per hour	60.00	70.00
Link Instruction @ $7.50 per hour	112.50	112.50
3. Secondary trainers (125 h.p. or over)		
Dual Instruction @ $16.00 per hour	48.00	192.00
Solo Instruction @ $14.00 per hour	70.00	70.00
Instrument Instruction @ $16.00 per hour	80.00	80.00
4. Classroom ground hours @ $ .70 per hour	105.00	126.00
TOTAL	$1,707.50	$2,026.50

**90 h.p. trainers may be substituted for 65 h.p. trainers whenever student desires. Since 90 h.p. aircraft are radio equipped, it may be to your advantage to consider some substitution. If 90 h.p. trainer time is substituted for ALL 65 h.p. trainer time, the minimum cost would be $1,979.50 and the maximum $2,346.50.

Course terms: $300.00 per month in advance until paid.

Cost of books and supplies will not exceed $30.00.

INSTRUMENT RATING

	Minimum*	Maximum*
1. Dual Instruction @ $16.00 per hour	$ 320.00	$ 400.00
2. Link Instruction @ $6.00 per hour	75.00	150.00
3. Classroom Ground Instruction	50.00	50.00
TOTAL	$ 445.00	$ 600.00

Terms: $300.00 upon matriculation. Balance thirty days thereafter. Cost of books and equipment will not exceed $30.00.

MULTI-ENGINE PILOT

(D-18-S Twin Beechcraft)

Minimum and maximum cost are computed as follows:

	Minimum*	Maximum*
Dual Flight Instruction Hours	10	15
MINIMUM* 10 hours @ $50.00		$ 500.00
MAXIMUM* 15 hours @ $50.00		$ 750.00

Observer time as necessary — at no charge.

*Every student has a greater or lesser natural flying aptitude than the other students. For this reason, it is impossible to anticipate the exact number of hours training any given student will need in order to reach the flying proficiency required for that course. All references to minimum and maximum tuition indicate the two extremes of cost. It is most probable that, with the average aptitude, tuition will fall somewhere between these two extremes.

FOREIGN STUDENTS

Foreign students are required to pay one-half of the cost of the course in which they are enrolled at the time of final registration. The balance of the tuition will be paid at the beginning of the second one-half of the course in which the student is enrolled. No refunds will be made in the event the student withdraws from the program.

TRANSFER STUDENT

Students transferring from accredited technical institutes or colleges will be provisionally credited with work presented if they satisfy the admission requirements of the course and have satisfactory records with an average of 2.0 or higher. No grade will be accepted unless it is at least one grade above the minimum passing grade. Final acceptance of transfer credits is dependent upon suitable demonstration of the student's ability to do satisfactory work in the course. Transfer students who intend to graduate from Aeronautical Engineering Design must complete a minimum of 35 semester hours of resident work at Embry-Riddle Aeronautical Institute to fulfill requirements for this course.

SCHOLASTIC COMMITTEE

The Scholastic Committee reviews the progress of each student on the first Wednesday of each month. At the end of the semester, the Scholastic Committee interviews those students having difficulties and recommends appropriate action to the Director. The Committee reviews the student's progress on the following basis:

1. The honor point average at the end of each term must be sufficiently high to enable the student to obtain a 2.0 average before he enters the final semester course.

2. If the Committee feels that the student is not progressing satisfactorily toward the required value at the end of the semester, it may recommend that the student be required to repeat courses to raise his honor point average.

3. If, at any time, the student apparently cannot maintain a sufficiently high scholastic average, the Committee may recommend the student discontinue his studies in the course.

4. Any student receiving "F" in a subject will be required to repeat that subject. He may, on the recommendation of the Committee, repeat other subjects for the purpose of raising his honor point average; or he may, on recommendation of the Committee, pursue advanced studies which are not dependent upon a thorough knowledge of the course he has previously failed and is not repeating.

5. Any student receiving "F," "D" or "WF" in a subject in which he has previously received an "F," "D" or "WF" is discouraged from continuing his studies in the curriculum in which he is enrolled.

6. The Scholastic Committee must recommend students for graduation.

7. All assignments and projects must be successfully completed before graduation is permitted.

8. Attendance record must be satisfactory.

9. All financial obligations must be satisfactorily concluded.

PERIODS OF ATTENDANCE

AERONAUTICAL DRAFTSMAN
AERONAUTICAL ENGINEERING TECHNOLOGY

8:00 A.M. to 4:00 P.M. (depending on class schedules).

Length of school week: 5 days, Monday through Fridays. Normal attendance will not exceed 25 hours per week.

AIRFRAME AND POWERPLANT TECHNICIAN

7:30 A.M. to 2:00 P.M.

Length of school week: 5 days, Monday through Friday. 6 hours per day for a total of 30 hours per week.

FLIGHT COURSES

As per flight and ground school schedules.

BUSINESS PILOT

EXECUTIVE PILOT

A & P COMBINED WITH COMMERCIAL PILOT

Classes in these courses have various schedules that are too detailed to be presented here. Class schedules are supplied to new students at the time of final registration.

Students in the Aeronautical Engineering Technology Course, Aeronautical Draftsman Course, Airframe and Powerplant Technician Course, A& P Combined with Commercial Pilot Course and the Executive Pilot Course will be scheduled for a two week leave of absence during the Summer and a two week leave of absence during the Christmas Holidays. Flight training courses will not require these leave provisions, but will observe all legal holidays.

SCHEDULED HOLIDAYS

Christmas Day
Memorial Day
Labor Day
New Year's Day
Independence Day
Thanksgiving (2 Days)

ABSENTEEISM

If the accumulated number of absences for any one subject in a semester exceeds the scheduled number of semester hours of credit for that subject, the student will receive a Corrective Action Notice and report to the Director. After consideration of the factors involved, the Director will decide what corrective action is to be taken. In cases where the absences have no justification a permanent penalty of one honor point for each excessive absence may be enforced and put in the student's academic record.

A tardiness or absence of 30 minutes or more will count as a full hour of absence. Tardiness or absence less than 30 minutes will be reported but may be excused, at the discretion of the instructor concerned, up to four times per calendar month. All tardiness and absences less than 30 minutes in excess of four per calendar month will be reported as a full hour absence.

Exceptional cases of absences or tardiness will be handled individually.

STUDENT POLICIES

The Engineering Library maintains a file of Student Policies that govern student activities. New policies are posted on the bulletin board for one week. It is the responsibility of the student to maintain conduct in accordance with these policies.

STUDENT COUNCIL

Each class elects a student council representative. The student council meets weekly to discuss student affairs. Twice a month, or more often if desired, the student council meets with the Director of Engineering Technology. This Student Council creates various clubs and sponsors social affairs, such as dances and beach parties.

SUBJECT INTERCHANGE

Subjects may be interchanged between semesters or replaced with other approved subjects for the purpose of better class schedules and in the interest of more efficient student group participation.

ORIENTATION

OBJECTIVE: This semester is designed to provide a basic knowledge of sciences in order to prepare the student for the analytical work encountered in the various courses of the institute. Credits earned in Orientation do not apply to graduation requirements.

CURRICULUM

Subject No.	Subject	Credits
W-1	Elementary Algebra	5-0-5
W-2	Plane Geometry	5-0-5
W-3	Physics	5-0-5
W-4	English	5-0-5
W-5	Trigonometry	5-0-5

FINAL REGISTRATION: Approximately thirty days prior to class starting dates, enrollees will be notified of dates on which final registration must be completed.

SCHEDULES: All Divisions of the School operate on a five-day week schedule, with the exception of the Flight Division where occasional weekend cross country flights may be scheduled.

ATTENDANCE: Regular and punctual attendance is required of all students. No excuses for absences are issued. In special cases or certain situations (health, etc.), students should notify Division Directors of reasons for such absences, but such notifications are not considered excuses for absences.

WITHDRAWAL: No withdrawal from Embry-Riddle is official until the student has consulted the Division Director, the Registrar and the Accounting Department. Veterans attending school under the G. I. Bill of Rights must also complete VA forms prior to withdrawal.

FINANCES

PAYMENT OF EXPENCES: Expenses at Embry-Riddle consist of tuition, supplies and residence charges. Registration is considered complete only when all charges have been paid as stated in the outlines of the program.

REFUNDS: In the event that a student (veteran or non-veteran) fails to enter the course for which he has been accepted, or withdraws or discontinues his training at any time prior to the completion of the course, a refund will be made on a pro-rata basis of all tuition. Registration fee of $10.00 is not refundable to any applicant who has been accepted for a course of training.

FINANCIAL AID: Embry-Riddle offers no scholarships, student loans or financial aids of any type.

VETERANS EDUCATIONAL BENEFITS

GENERAL INCORMATION: Embry-Riddle maintains a division within the registrar's office to assist veterans who are attending school under the G. I. Bill of Rights.

PUBLIC LAW 550 (KOREAN): Veterans who will be attending school under Public Law 550 (Korean) will have the necessary Veterans Administration forms sent to them for completion as soon as their application has been accepted. These forms should be returned to Embry-Riddle for submission to the Florida V. A. Office. In the event that you have had previous contact with the V. A. and have established a Claim Number (C No), please request your local V. A. Office to transfer your records to:

Veterans Administration Regional Office
P. O. Box 1437
St. Petersburg, Florida

It is not necessary that your certificate for education and training be issued prior to starting school, providing proper application has been made.

CAUTION TO VETERANS (P. L. 550): Monthly subsistence checks are paid direct to the veteran and the veteran is personally responsible to the school for his expenses. Veterans, however, do not begin to receive their checks until at least six weeks after training has started. They, therefore, should come prepared to pay in advance for at least a two-month period for tuition, dormitory, supplies and living expenses.

SPECIAL INFORMATION FOR VETERANS UNDER G. I. BILL — PUBLIC LAW 550

Under Public Law 550, veterans are entitled to 1½ days' educational benefits for each day served from June 27, 1950, to date of discharge, up to a maximum of 36 months. Veterans who entered the Service after January 31, 1955 are not eligible for training under the G. I. Bill of Rights-Public Law 550.

1. Veterans enrolled in residence school for technical courses are entitled to the following training allowance (36 months limit):
   Veteran with No Dependents . . . . . $110 per month
   Veteran with One Dependent . . . . . $135 per month
   Veteran with Two or More Dependents . . . $160 per month

   The veteran is required to pay his tuition and other expenses.

2. For each day of educational benefit the veteran has earned, the Veterans Administration will pay $1.25 for flight training. However, the V. A. pays only 75 per cent of the exact cost of flight training, up to your maximum eligibility. The veteran must enroll for flight training and pay each month; then, the V. A. reimburses him 75 per cent of the monthly cost, until he has received maximum eligibility.

The veteran who enrolls in our A. & P. Technician Course receives the benefits shown in Paragraph 1, above. The cost of this technical course is much less than the benefits to which he is entitled. The training allowance over and above the cost of technical training may be used for flight training (as explained in paragraph 2, above).

GRADING PROCEDURE

Grade	Relative Standing	Honor Points Per Semester Hour
A	Superior	4
B	Above Average	3
C	Average	2
D	Below Average	1
E	Conditional	0
F	Failure	0
WF	Withdrawal while failing during the last two-thirds of the course	0
WP	Withdrawal while passing during the last two-thirds of the course	0
W	Withdrawal during the first third of the course	0
U	Auditing the course without credit	0
G	Passing but incomplete work	0

Students receiving the grade E are required to take a comprehensive examination in the failed subject within one week after the start of the following semester.

Students passing this comprehensive examination will have the grade E replaced with their final grade. This final grade, however, will be no higher than a D.

In the event that the student does not take the comprehensive examination the E will automatically convert to F and the student will be required to repeat the course.

An F on a student's record is permanent. Even though the student repeats the course and receives a new grade, the F will remain on his record and transcript for the semester in which the F was received.

Students receiving the incomplete grade must make up their work within one semester; however, their final grade will be reduced one letter grade as a penalty for not completing their work in the normal length of time. If the incomplete grade is not removed within one semester, it becomes an F.

SEMESTER HOUR CREDIT:

All credits are recorded in terms of semester hours. A semester hour of credit is given for one 50-minute lecture per week throughout the 16 week semester. In counting credits earned in the laboratory, a semester hour is considered to be two laboratory hours requiring outside preparation and three laboratory hours requiring little or no outside preparation. No grades or credits are offered to students auditing a course.

GRADUATION REQUIREMENTS

AERONAUTICAL ENGINEERING
AERONAUTICAL ENGINEERING TECHNOLOGY
AERONAUTICAL DRAFTSMAN

A student must complete 141 semester hours to fulfil the requirements for the Bachelor of Science Degree in Aeronautical Engineering.

A total of 105 semester hours are required for the Associate of Science Degree in Aeronautical Engineering Technology.

A total of 64 semester hours are required for the Aeronautical Draftsman diploma.

Orientation subjects, which may be necessary when placement tests so indicate, are in addition to the above required number of semester hours.

The work of all students is under the supervision of the Director of Engineering Technology and the Scholastic Committee. Before a student may graduate, the student's record is reviewed by the Scholastic Committee for successful completion of courses and satisfactory progress. To successfully complete the course the student must attain the final average of 2.0 in the curriculum. (See grading procedure on page 30.)

Probation measures are adjusted by the Scholastic Committee and are either academic or disciplinary. Academic probation is imposed when the student earns a quality point average below 1.5 for any regular semester's work, or when in the judgement of the committee or director he is not maintaining satisfactory progress toward graduation. The probation may be removed by the student's achieving a 2.0 average in the next semester's work and indicating to the satisfaction of the Director of Engineering Technology that he will make up the deficiency in quality points. It is usually advised that the student, while under probation, reduce his academic load to 15 semester hours.

Students who fail to remove this probationary status are subject to dismissal from the course on recommendation of the Scholastic Committee.

AIRFRAME AND POWERPLANT TECHNICIAN

A student must complete 70 semester hours with a satisfactory grade (2.0 average) to qualify for a diploma as an Airframe & Powerplant Technician.

A and P COMBINED WITH COMMERCIAL PILOT

Successful completion of the above mentioned Airframe and Powerplant Technician along with the Commercial Pilot course described on the next page.

GRADUATION REQUIREMENTS (Continued)

COMMERCIAL PILOT

Successful completion of Flight courses FC11 through FC20 in addition to ground training courses CS11, MS11, NS11, RS11 and GS11 with a "C" (2.0) average and the necessary flight proficiency required for the Commercial Pilot examination.

BUSINESS PILOT

To insure fulfillment of the requirements for the Degree of Bachelor of Business Administration and the Business Pilot certificate the candidate must complete the following:

A. A minimum of 120 credits and a "C" average.

B. In addition to the academic requirements mentioned in paragraph "A," it is necessary that the candidate complete flight courses 363, 364, 365 and 366 to qualify for the certificate in Business Piloting.

EXECUTIVE PILOT

To qualify for graduation as an Executive Pilot the candidate must complete the academic courses covered in the first two semesters of work described on page 53. This will be in addition to any Orientation subjects.

The student must further complete the 70 semester credit hours in the technical subjects given in the third, fourth, fifth and sixth semesters. It will also be necessary for the student to complete all flight training courses listed under the Executive Pilot curriculum on the afore mentioned page.

A "C" (2.0) average is required for graduation.

INSTRUMENT PILOT

Successful completion of courses IR12, IR30 and IF31 which are described on page 55. A "C" (2.0) average is required for graduation.

MULTI-ENGINE PILOT

The minimum flight hours described in the course outline on page 55 (ME40) plus sufficient flight proficiency to pass the flight examination.

"Each young American owes it to himself, and to his country, to prepare to meet the demands and opportunities of the future. Toward the achievement of this goal, education and training are essential."

Dwight D. Eisenhower
President of the United States

Your trained talents are needed and wanted. You can have a career near your home, or a job that "takes you places."

VICE PRESIDENT L. D. CARLTON
AWARDING DIPLOMAS TO A GRADUATION CLASS

DEGREES, CERTIFICATES AND DIPLOMAS

AERONAUTICAL DRAFTSMAN

Embry-Riddle School Diploma as an Aeronautical Draftsman awarded upon successful completion of the course of study.

AERONAUTICAL ENGINEERING TECHNICIAN

Associate of Science Degree awarded upon successful completion of the course of study.

AIRFRAME AND POWERPLANT TECHNICIAN

Embry-Riddle School Diploma and Federal Aviation Agency Graduation Certificate as an Airframe and Powerplant Technician awarded upon successful completion of the course of study.

A & P COMBINED WITH COMMERCIAL PILOT

Embry-Riddle School Diploma as an Airframe and Powerplant Technician and Commercial Pilot together with Federal Aviation Agency Graduation Certificates as an Airframe and Powerplant Technician and Commercial Pilot awarded upon successful completion of the course of study.

EXECUTIVE PILOT

Embry-Riddle School Diploma as an Executive Pilot together with Federal Aviation Agency Graduation Certificates as an Airframe and Powerplant Technician and Commercial Pilot and Instrument Pilot awarded upon successful completion of the course of study.

BUSINESS PILOT

Bachelor of Business Administration Degree and Certificate in Business Piloting awarded by the University of Miami and Embry-Riddle.

COMMERCIAL PILOT

Embry-Riddle School Diploma and Federal Aviation Agency Graduation Certificate as a Commercial Pilot awarded upon successful completion of the course of study.

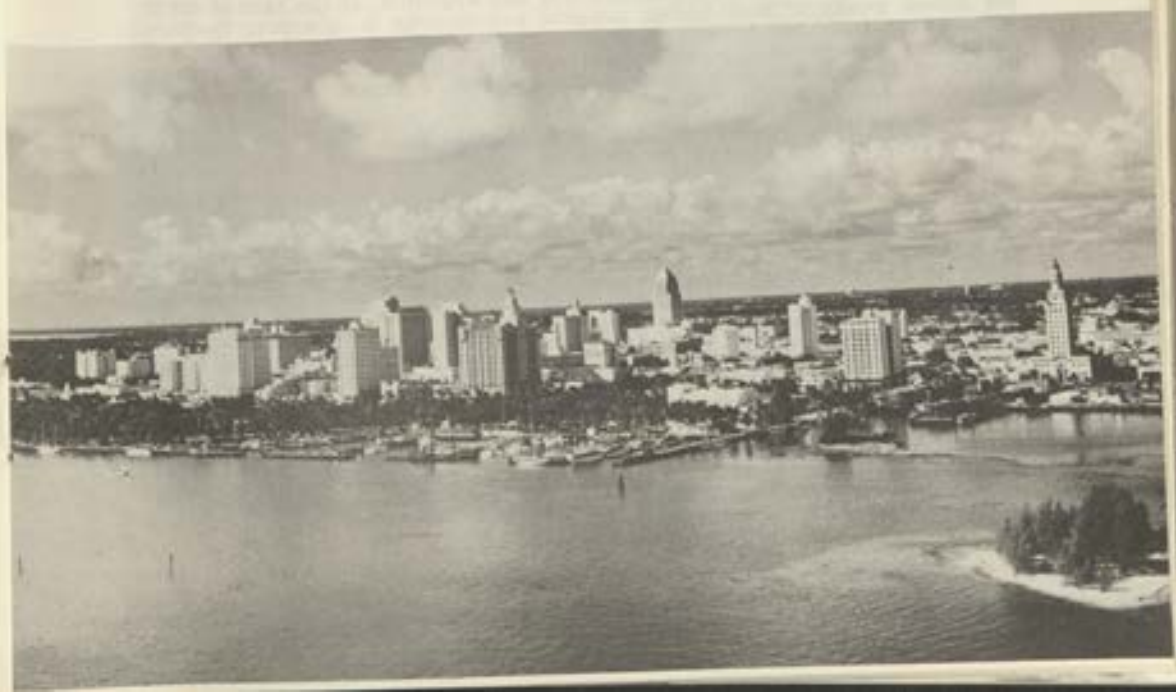
INSTRUMENT PILOT

Embry-Riddle School Diploma and Federal Aviation Agency Graduation Certificate as an Instrument Pilot awarded upon successful completion of the course of study.

MULTI-ENGINE PILOT

Embry-Riddle School Diploma awarded upon successful completion of the course of study.

SO MUCH TO DO . . . SO MUCH TO SEE



STUDENT SERVICES AND WELFARE

STUDENT MAIL

Any student may have mail addressed to himself as follows:

Name
P. O. Box 52-568, Biscayne Annex
Miami 52, Florida

The student may continue to use this address while attending school, regardless of whether or not he resides in the dormitories.

BAGGAGE AND EXPRESS

All baggage and express packages, sent prior to your arrival at school, **must** be sent prepaid. These items should be addressed as follows:

Name
c/o Embry-Riddle Student Counselor
Room 139 — Aviation Building
3240 N. W. 27th Avenue
Miami, Florida

Baggage and express packages sent in this way will be held for you until your arrival.

PERSONAL FINANCES

Students are urged to open local bank accounts to meet their personal needs. Until such arrangements are made, remittances to students should be made by cashier's check or money order, as the banks will accept out of town personal checks for **collection only.**

A restricted check cashing service is available from the school.

STUDENT AUTOMOBILES

Embry-Riddle students are permitted to keep automobiles on the school grounds as long as they are operated safely, courteously and moderately. If this principle is violated, the privilege of keeping the car at school will be denied.

STUDENT RESIDENCES AND SERVICES

DORMITORIES: Applicants for training may apply for reservations in the school dormitories. Twin rooms only are available, at the rate of $28.00 per school month of four weeks, payable two months in advance. Students withdrawing from the dormitory prior to the end of the second month, will **not** receive any refund of prepaid dorm rent. Dormitory students must furnish their own linens. Minimum items necessary are: 4 sheets, 2 pillow cases, 2 blankets and sufficient towels.

If you wish, you may bring a radio, clock or other items that may add to your personal convenience and comfort.

You may be admitted to the dormitory upon your arrival for final registration.

OFF CAMPUS HOUSING: Embry-Riddle does not maintain any apartments or quarters for married students. The student counselor has a listing of apartments and homes in the vicinity of the school, which will be made available to students desiring off campus housing. Almost all apartments and homes for rent in this area are furnished. Several trailer parks are located within a few miles of the school for the convenience of those students owning or desiring to rent a trailer.

BARBER SHOP: A modern three chair barber shop is located in the main building.

LAUNDRY: The school operates no laundry service. There are, however, self service launderettes, as well as commercial laundry and dry cleaning firms within easy walking distance of the dormitory.

MEALS: For the convenience of students, there is a modern restaurant located in the Aviation Building, open five days per week. In addition, there are numerous restaurants and cafeterias in the immediate vicinity of the school.

EMPLOYMENT AND PLACEMENT

PART-TIME EMPLOYMENT: Students desiring part-time employment, may register with the student counselor. No student will be considered for any employment until after he has started classes and has indicated to the faculty that part-time employment will not affect his standing in the course he is pursuing.

PLACEMENT: Graduate students are assisted in locating desirous employment through the placement director at Embry-Riddle. While we naturally do not guarantee employment, we are in close contact with the airlines and allied aviation industries. Fortunately, there are many Embry-Riddle graduates in key positions in aviation who are fully aware of the value of your training.

Student Counselor, Mr. N. T. Ingram, assisting student in locating part-time employment

EMPLOYMENT OPPORTUNITIES

All courses of study at Embry-Riddle are designed to prepare the graduate for employment in aviation and the allied industries. In the following paragraphs we will set forth examples of the types of positions usually offered to the graduates of Embry-Riddle, as well as opportunities for advancement.

It is customary for representatives of the various Air Lines in the United States to visit the school and speak to the graduating class in the Airframe and Powerplant division regarding mechanical positions available with their organizations. These positions may range from line maintenance to engine, airframe and accessory overhaul. These employment opportunities may be in any section of the United States, and occasionally opportunities are presented for over seas assignments. In addition to this, many of the students desire employment with a fixed-base operator on a local Air Port. The placement department contacts the Air Port operators in the desired locations in order to assist the graduate in securing suitable employment.

Graduates of the A and P Combined With The Commercial Pilot course are mostly in demand by corporations that operate aircraft ranging from one to a large fleet. The graduate will normally be employed as a Co-Pilot Mechanic on such aircraft. His duties will include preventive maintenance, thorough preflight inspections and, of course, emergency repairs enroute. After a period of time as a Co-Pilot Mechanic, the employee is advanced to the position of Captain (Aircraft Commander) when expansion, replacement or retirement dictates.

Employment opportunities for the Executive Pilot graduate is very similar to that of the Co-Pilot Mechanic described previously, with the exception that on numerous occasions the Executive Pilot graduate becomes an assistant or aide to the Executive he is flying. He may be called upon for sales or promotional work in addition to his flight and mechanical duties.

The graduates of the Business Pilot program, which is offered in conjunction with the University of Miami, have obtained a sound education in aviation management, as well as in general business. These people are frequently employed in a junior executive or assistant administrative post with an Airline Company or any of its allied industries – or he may be employed as a sales representative for aviation or other products. In addition to these duties he may be called upon to fly the company owned aircraft in order to cover a territory or perform other duties in a more proficient manner.

Students desiring to pursue a program of flight training alone should give careful consideration to the following:

> In most cases, we have found that having the certificates and ability to fly an aircraft is insufficient for employment. Employers usually require that an applicant have previous college or Aeronatutical Technical Training in order to meet employment qualifications.

EMPLOYMENT OPPORTUNITIES (Continued)

All of the Business, Executive and Commercial Aircraft are flown by pilots who have the finest Aeronautical or Academic background obtainable. If you have had previous college training (most companies require a minimum of two years) or, if you have completed Aeronautical Technical Training and have an FAA A & P License, chances are that flight training alone will qualify you for employment. If, however, you have completed high school only and do not possess the other qualifications, we would recommend that you give serious consideration to either the Executive Pilot Course or the Business Pilot Course. Either of these courses is designed to take the average high school graduate and prepare him for a career in the air. The Airframe and Powerplant Technician combined with Commercial Pilot Course is designed for those who have had some college or business training, or for those who after completing high school, have been engaged in a business pursuit where they have obtained equivalent knowledge to that offered by the academic portion of the Executive Pilot program.

Naturally, if you have another goal, such as self employment, or feel that flight training alone would meet your needs, we would be most happy to have your application for these courses.

The graduates of the ECPD accredited Aeronautical Engineering Technology Program are hired into the engineering design departments of large Aircraft or Missile Manufacturing and Development Companies, often with practically the same duties and salary as the B. S. Aeronautical Engineering graduates from Universities. This is understandable when you recognize that the 104 semester hour credits required for the Associate of Science Degree includes most of the technical subjects and advanced mathematics included in the B. S. curriculum of the four year University program. The principal difference (besides the number of hours and amount of time required) is that the Aeronautical Engineering Technology course is terminal in nature. That is, the object is to put emphasis on the subjects that will prepare the graduate to step right into a job in an Engineering Design deparment and be able to produce acceptable designs and drawings right from the first. Also, a field that is becoming increasingly important, is the Technical Report Writing field. We find that many of our graduates are stepping into responsible positions in this field.

The graduates of our four semester course in Aeronautical Drafting step into positions with the large Aircraft and Missile Manufacturing and Development Companies as draftsmen with a salary somewhat less than the graduate with an Associate of Science degree in Aeronautical Engineering Technology. These are usually the students who are interested in Aeronautical design but find the more advanced courses in engineering and mathematics too difficult. They can switch to this course from the regular curriculum in Aeronautical Engineering Technology, since the first semester of both courses are identical.


Embry Riddl
INTERNATIONAL SCHOOL OF A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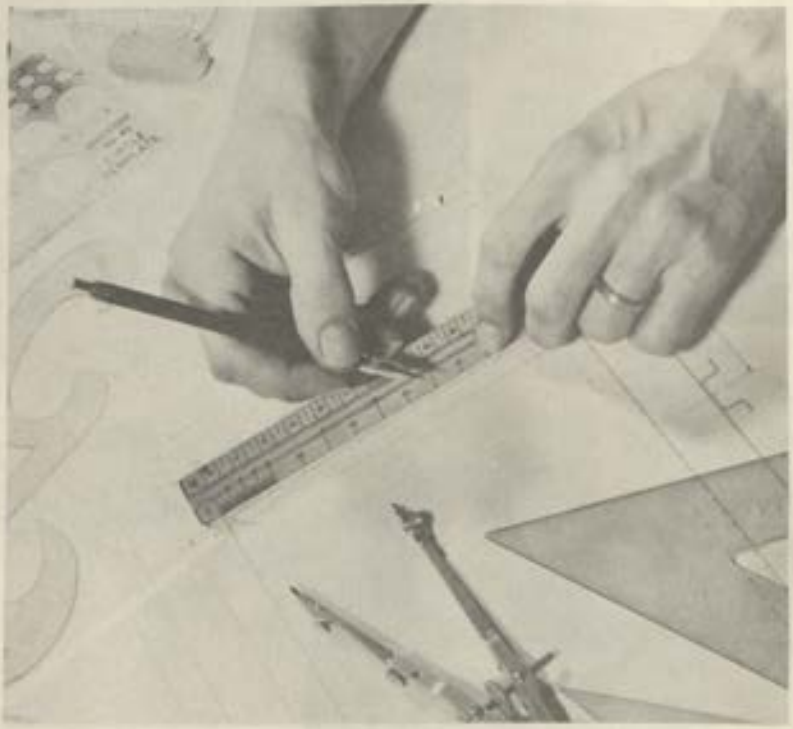
N62970

AERONAUTICAL DRAFTSMAN

Positions of great responsibility in engineering departments are filled by graduate engineers and aeronautical engineering technicians. Working with them in excellent career positions are the detail draftsmen, detail and layout designers, weights department and tool design personnel, who accomplish 80 per cent of the work done in the department. Each of these is a specialist through choice, but all are competent draftsmen trained in the subjects foundamental to airplane design.

The Aeronautical Draftsman course offers the basic knowledge necessary to qualify you for the position of aeronautical draftsman. It includes extensive drafting training in the aeronautical and mechanical fields. Aircraft production methods are thoroughly covered in aeronautical and mechanical laboratories.



AERONAUTICAL DRAFTSMAN

4 Semesters (16 Week Semesters) 16 Months Full Time

The following subjects are required for completion of the Aeronautical Draftsman course:

1st Semester:	ME-10.	Engineering Drawing I	0	6	2
	MA-11.	Algebra	5	0	5
	MA-14.	Trigonometry & Analytics	5	0	5
	PH-11.	Physics I	3	0	3
	PH-14.	Physics I Laboratory	0	3	1
	EH-11.	College English	2	0	2
					18
2nd Semester:	ME-11.	Engineering Drawing II	0	6	2
	ME-15.	Materials & Processes	3	0	3
	ME-16.	Statics	5	0	5
	ME-24.	General Shop Practice Laboratory	0	2	1
	PH-12.	Physics II	3	0	3
	PH-15.	Physics II Laboratory	0	3	1
	EH-12.	Technical Report Writing	2	0	2
					17
3rd Semester:	ME-12.	Descriptive Geometry	0	6	2
	ME-22.	Fluid Mechanics	3	0	3
	AE-18.	Airframe Laboratory	0	2	1
	AE-24.	Principles of Aircraft Design	3	0	3
	AE-25.	Aircraft Drafting	0	6	2
	EH-14.	Public Speaking	2	0	2
	EH-15.	Psychology	2	0	2
					15
4th Semester:	AE-26.	Aircraft Detail Design	0	6	2
	AE-27.	Airplane Design	0	6	3
	AE-28.	Aircraft Systems Laboratory	0	2	1
	AE-29.	Aircraft Propulsion Systems	3	0	3
	AE-30.	Aircraft Propulsion Systems Lab	0	2	1
	EH-16.	Business English	2	0	2
	EH-18.	Economics	2	0	2
					14
		TOTAL CREDITS FOR CERTIFICATE			64

AERONAUTICAL ENGINEERING TECHNOLOGY

It was not until America's first satellite was launched that most Americans became aware of new job classification — the Aeronautical Engineering Technician. They had read in the headlines how the engineers and technicians hovered around the massive rocket, but few understood the exact responsibilities and duties of the Aeronautical Engineering Technician.

Even fewer are aware of the technician's role in the aviation industry — that there is a great need for many more technicians than for engineers — and that there is a critical shortage of these technicially trained personnel.

In spite of the incredible inventions and advancements that have been made in the field of aeronautics, the world is still on the threshold of the Age of Space. In your lifetime the moon may become just a "way station" to far more distant places.

Future opportunities are expanding as rapidly as aviation itself — and with Embry-Riddle technical training you can carve a remunerative and exciting career in the new Age of Space.

AERONAUTICAL ENGINEERING TECHNOLOGY

6 Semesters (16 Week Semesters) 2 Years Full Time

SEMESTER	Subject No.	SUBJECT	Lecture	Lab	Total Credits
1st Semester:	EH-11.	College English	2	0	2
	MA-11.	Algebra	5	0	5
	MA-14.	Trigonometry & Analytics	5	0	5
	ME-10.	Engineering Drawing I	0	6	2
	PH-11.	Physics I	3	0	3
	PH-14.	Physics I Laboratory	0	3	1
					18
2nd Semester:	EH-12.	Technical Report Writing	2	0	2
	MA-15.	Differential Calculus	4	0	4
	ME-11.	Engineering Drawing II	0	6	2
	ME-16.	Statics	5	0	5
	ME-24.	General Shop Practice Laboratory	0	2	1
	PH-12.	Physics II	3	0	3
	PH-15.	Physics II Laboratory	0	3	1
					18
3rd Semester:	AE-18.	Airframe Laboratory	0	2	1
	EH-15.	Psychology	2	0	2
	MA-16.	Intergral Calculus	5	0	5
	ME-12.	Descriptive Geometry	0	6	2
	ME-17.	Dynamics	5	0	5
	ME-22.	Fluid Mechanics	3	0	3
					18
4th Semester:	AE-13.	Aerodynamics I	5	0	5
	AE-28.	Aircraft Systems Laboratory	0	2	1
	EH-14.	Public Speaking	2	0	2
	ME-15.	Materials and Processes	3	0	3
	ME-18.	Strength of Materials	5	0	5
					16
5th Semester:	AE-14.	Aerodynamics II	5	0	5
	AE-19.	Wind Tunnel Laboratory	0	3	1
	AE-21.	Aircraft Structures I	5	0	5
	AE-24.	Principles of Aircraft Design	3	0	3
	AE-25.	Aircraft Drafting	0	6	2
	EH-18.	Economics	2	0	2
					18
6th Semester:	AE-22.	Aircraft Structures II	5	0	5
	AE-26.	Aircraft Detail Design	0	6	3
	AE-27.	Airplane Design	0	6	3
	AE-29.	Aircraft Propulsion Systems	3	0	3
	AE-30.	Aircraft Propulsion Systems Laboratory	0	2	1
	EH-16.	Business English	2	0	2
					17
		TOTAL FOR GRADUATION			105
ORIENTATION:	W-1.	Elementary Algebra	5	0	5
	W-2.	Plane Geometry	5	0	5
	W-3.	Physics	5	0	5
	W-4.	English	5	0	5
	W-5.	Trigonometry	5	0	5
					25

AERONAUTICAL ENGINEERING

The Bachelor of Science Aeronautical Engineering program is established to accomodate those who are interested in a complete engineering education at the college level.

This program includes 8 full semesters for a total of 141 credit hours and can be completed in 32 calendar months by attendance on a full time basis. It includes 24 credits of study in the Humanities and the Social Sciences; English, Economics, Psychology, History, World Literature and Philosophy. These courses are considered an integral part of the curriculum fully as important as the technical studies.

Realizing the urgent need for engineers and scientists at all levels we welcome applicants for admission to this program.

AERONAUTICAL ENGINEERING

Bachelor of Science Degree

8 Semesters (16 Week Semester) 32 Months Full Time

1st SEMESTER:	Credits
EH-11. College English I	2
MA-11. Algebra	5
MA-14. Trigonometry & Analytics	5
CH-11. Chemistry I	3
ME-10. Engineering Drawing I	2
AE-18. Airframe Laboratory	1
	18

2nd SEMESTER:	
EH-14. Public Speaking	2
CH-12. Chemistry II	3
MA-15. Differential Calculus	4
ME-11. Engineering Drawing II	2
ME-16. Statics	5
ME-24. General Shop Practice	1
	17

3rd SEMESTER:	
PH-11. Physics I	3
PH-14. Physics I Laboratory	1
MA-16. Integral Calculus	5
ME-12. Descriptive Geometry	2
ME-17. Dynamics	5
EH-12. Technical Report Writing	2
	18

4th SEMESTER:	
MA-17. Differential Equations	3
ME-22. Fluid Mechanics	3
PH-12. Physics II	3
PH-15. Physics II Laboratory	1
AE-13. Aerodynamics I	5
ME-20. Thermodynamics I	3
	18

5th SEMESTER:	Credits
AE-14. Aerodynamics II	5
ME-21. Advanced Thermodynamics	3
EH-15. Psychology	2
ME-18. Strength of Materials	5
ME-15. Materials and Processes	3
	18

6th SEMESTER:	
AE-21. Aircraft Structures I	5
AE-24. Principles of Acft. Design	3
AE-25. Aircraft Drafting	2
EH-21. American History	3
EH-23. World Literature	3
AE-19. Wind Tunnel Laboratory	1
	17

7th SEMESTER:	
AE-22. Aircraft Structures II	5
AE-27. Aircraft Design	3
AE-26. Aircraft Detail Design	3
EH-18. Economics I	2
AE-28. Aircraft Systems Lab	1
EH-24. Philosophy	3
	17

8th SEMESTER:	
EH-22. World History	3
AE-29. Aircraft Propulsion Systems	3
AE-30. Acft. Propulsion Syst. Lab	1
EH-16. Business English	2
EH-19. Economics II	3
AE-17. Supersonic Aerodynamics	3
EE-11. Electrical Engineering	3
	18

TOTAL CREDITS FOR GRADUATION 141

AIRFRAME AND POWERPLANT TECHNICIAN

A & P COMBINED WITH COMMERCIAL PILOT

The Airframe and Powerplant Technician License is normally considered as THE basic license in the aviation industry. It is necessary that all maintenance, modification and overhaul of an aircraft, its engines or component parts be under the supervision of a licensed A & P technician.

The airframe and powerplant license is normally required as a prerequisite for advancement to the position of flight engineer, inspector, maintenance supervisor and numerous other positions.

The majority of corporation owned aircraft in the United States reqiure that at least one pilot on each aircraft be a licensed technician. This is required by these organizations to insure perfect preflight inspections as well as emergency repairs when away from home base. Companies requiring a pilot-mechanic or copilot-mechanic also normally require that the applicant have a very good command of English and have broad interests and be capable of conversing on subjects other than aviation.

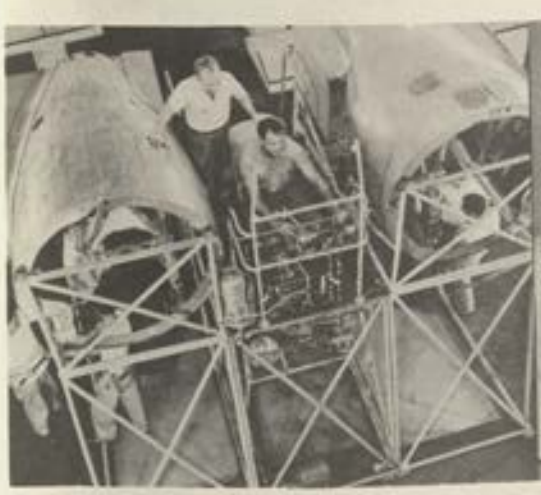
Students desiring to combine flight and mechanical training should refer to both the airframe and powerplant technician course beginning on Page 49 and the commercial pilot course which begins on Page 55 If the person looking forword to a corporation piloting position has a deficiency in any of the basic academic subjects, it is suggested that he give careful consideration to the Executive Pilot Program on Page 53 This is designed to prepare the graduate with a thorough basic academic background as well as all technical and flight subjects necessary.

AIRFRAME AND POWERPLANT TECHNICIAN

The work, skills and responsibilities of an A & P Technician should not be confused with those of mechanics in other industries. When compared with the complexities of modern multi-engine aircraft other mechanics occupation seems as child play.

An Embry-Riddle graduate is more a professional technician than a mechanic. He has worked on jet and reciprocating engines, wings, fuselages, landing gears and control systems, propellers, carburetors, fuel systems, hydraulic systems, electrical systems, rigging — in fact he has acquired all the knowledge and specialized skills necessary to take apart, repair and reassemble an entire airplane.

	Sem. Hrs. Credit
FIRST SEMESTER	
BS-11. Basic Science	5
BA-11. Basic Airframes	5
SM-11. Sheet Metal	4
WE-11. Welding	4
SECOND SEMESTER	
BP-12. Basic Powerplants	8
CA-12. Carburetion	4
PR-12. Propellers	4
THIRD SEMESTER	
HY-13. Hydraulics	5
EL-13. Electricity	5
AP-13. Advanced Powerplants	8
FOURTH SEMESTER	
AR-14. Assembly and Rigging	9
FI-14. Final Airframes and Powerplants	9



BUSINESS PILOT COURSE

The objective of the four-year Business Pilot Course is to provide sound education that will enable the graduate to qualify for employment in Aviation Administration or becoming a professional pilot. There are many attractive opportunities in the aviation industry for the graduate of this program. This course is offered in conjunction with the University of Miami.

The Business Pilot Program deals with the business aspects of the air industry. In the academic portion there are two areas of related concentration: Aviation Business Management and Aviation Technical Management. Students pursuing a major in aviation should consult with the aviation adviser at the beginning of their freshman year or at the time of entrance. The curriculum is arranged according to the needs of the individual student.

The following courses are required of all majors in Aviation Administration: 260, Principles of Transportation; 360, Air Transportation; 361, Aviation Meteorology; 362, Air Navigation; 465, Airline Operation; 466, Technical Aspects of Aviation; 467, Civil Air Regulations; 468, Air Cargo; 469, Legal Aspects of Aviation; 565, Airline Administration; 566, Airport Management.

In addition to the above required courses, the student is required to include Flight Courses 363, 364, 365 and 366.

120 credits are required for graduation. A Bachelor of Business Administration Degree is awarded, and a Certificate in Business Piloting, with Commercial, Instrument and Multi-Engine Ratings.

EMBRY-RIDDLE AND UNIVERSITY OF MIAMI COMBINED COURSES OF AVIATION STUDY

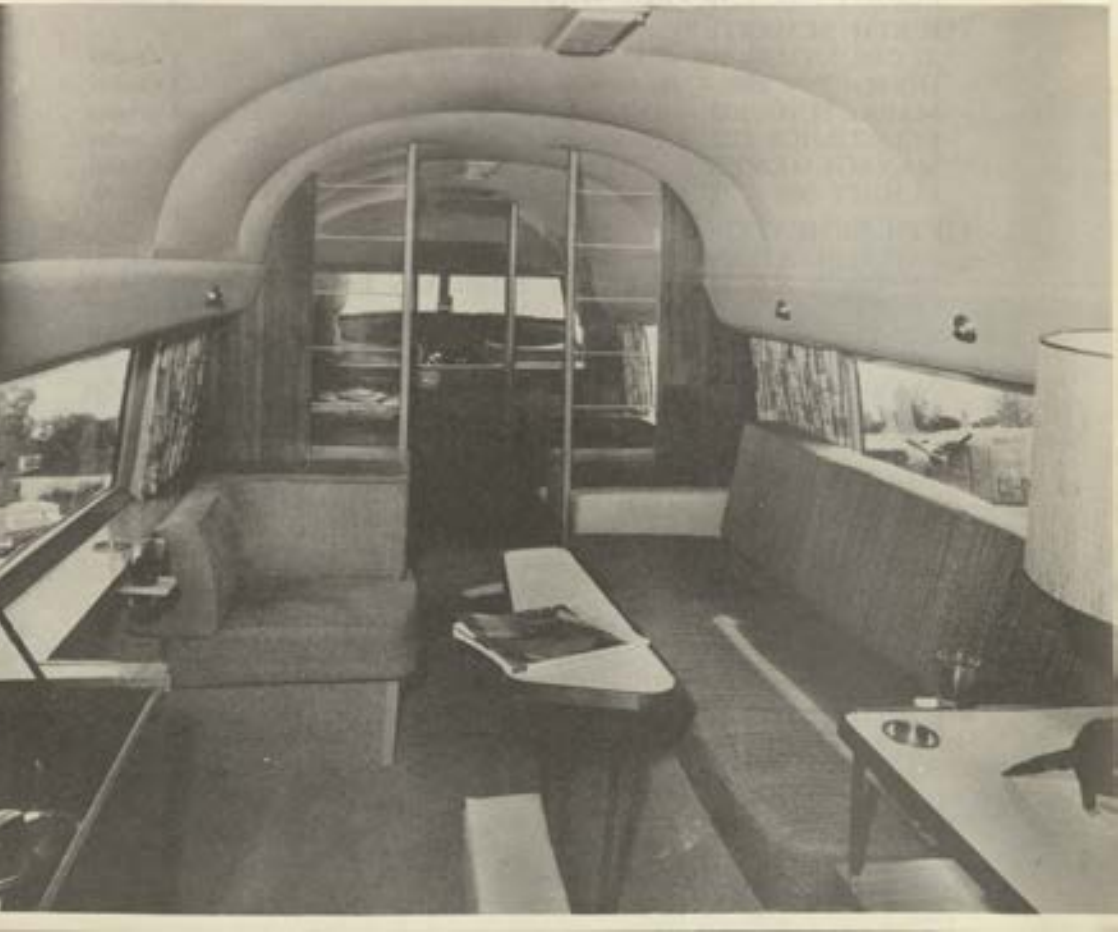
TYPICAL PROGRAM OF STUDY

FIRST SEMESTER:	
ENGLISH 111 – Composition	*3 Credits*
MATHEMATICS 101 – Algebra and Trigonometry	*3 Credits*
GOVERNMENT 141 – Introduction to American Politics	*3 Credits*
MANAGEMENT 362 – Air Navigation	*3 Credits*
ORIENTATION 103 – Orientation for Men	*3 Credits*
FLIGHT 363 – 60 Flight Hours	*1 Credit*
SECOND SEMESTER:	
ENGLISH 112 – Composition	*3 Credits*
MATHEMATICS 125 – Mathematics of Finance	*3 Credits*
GOVERNMENT 142 – Introduction to American Politics	*3 Credits*
MANAGEMENT 361 – Aviation Meteorology	*3 Credits*
MANAGEMENT 466 – Technical Aspects of Aviation	*3 Credits*
FLIGHT 364 – 65 Flight Hours	*1 Credit*
THIRD SEMESTER:	
ACCOUNTING 101 – Fundamentals of Accounting	*3 Credits*
HISTORY 201 – History of the United States to 1865	*3 Credits*
BUSINESS LAW 212 – Business Law Fundamentals	*3 Credits*
ECONOMICS 201 – Economic Principles and Problems	*3 Credits*
MANAGEMENT 201 – Principles of Management	*3 Credits*
FLIGHT 365 – 75 Flight Hours	*1 Credit*
FOURTH SEMESTER:	
ACCOUNTING 102 – Fundamentals of Accounting	*3 Credits*
HISTORY – 202 – History of the U. S. Since 1865	*3 Credits*
MARKETING 200 – Principles of Marketing	*3 Credits*
ECONOMICS 202 – Economic Principles and Problems	*3 Credits*
MANAGEMENT 202 – Personnel Management	*3 Credits*
FLIGHT 366 – 60 Flight Hours	*1 Credit*
FIFTH SEMESTER:	
PSYCHOLOGY 201 General Principles of Psychology	*3 Credits*
BUSINESS STATISTICS 221 – Elementary Business Statistics	*3 Credits*
FINANCE 301 – Money and Banking	*3 Credits*
MANAGEMENT 260 – Principles of Transportation	*3 Credits*
MANAGEMENT 368 – Aviation Radar	*3 Credits*
SIXTH SEMESTER:	
PSYCHOLOGY 250 – Applied Psychology	*3 Credits*
BUSINESS ENGLISH 347 – Business English	*3 Credits*
FINANCE351 – Business Finance	*3 Credits*
ECONOMICS 311 – Labor Economics-Labor Relations	*3 Credits*
MANAGEMENT 360 – Air Transportation	*3 Credits*
SEVENTH SEMESTER:	
MARKETING 403 – Salesmanship	*3 Credits*
MANAGEMENT 467 – Civil Air Regulations	*3 Credits*
ELECTIVES – Student choice of electives	*9 Credits*
EIGHTH SEMESTER:	
MANAGEMENT 469 – Legal Aspects of Aviation	*3 Credits*
ELECTIVES – Student choice of electives	*12 Credits*

"THIS IS AN AIRPLANE"

is the way one Embry-Riddle flight instructor introduces his fledgling pilots to their course of training. He knows that every detail must be covered, that the instructor can never assume knowledge on the part of the student. Everything that they are to learn here must be mastered with the same skill as a surgeon because, like the surgeon, the pilot is the man responsible.

This responsibility may take many forms. Perhaps the student is pursuing the Business or Executive Pilot course. If so, he can look forward to one day when he will be piloting a plush executive aircraft such as pictured below. Then, in all probability, he will be responsible for not only the airplane and its occupants but also to the company that employs him because on many occasions he will be their direct representative. So you see, there are many important reasons why Embry-Riddle takes such care in all aspects of its flight instruction.



EXECUTIVE PILOT

FIRST SEMESTER

	Sem. Hrs. Credit
EH-11. College English	2
EH-14. Public Speaking	2
EH-15. Psychology	2
MA-11. Algebra	5
PH-11. Physics I	3

SECOND SEMESTER

EH-16. Business English	2
EH-18. Economics	2
EH-12. Technical Report Writing	2
MA-14. Trigonometry & Anayltics	5
PH-12. Physics II	3

THIRD SEMESTER

BS-11. Basic Science	5
BA-11. Basic Airframes	5
SM-11. Sheet Metal	4
WE-11. Welding	4

FOURTH SEMESTER

	Sem. Hrs. Credit
BP-12. Basic Powerplants	8
CA-12. Carburetion	4
PR-12. Propellers	4

FIFTH SEMESTER

HY-13. Hydraulics	5
EL-13. Electricity	5
AP-13. Advanced Powerplants	8

SIXTH SEMESTER

AR-14. Assembly and Rigging	9
FI-14. Final Airframes and Powerplants	9

A student will also complete the following ground school and flight subjects. These may be scheduled at various intervals within the 6 semesters.

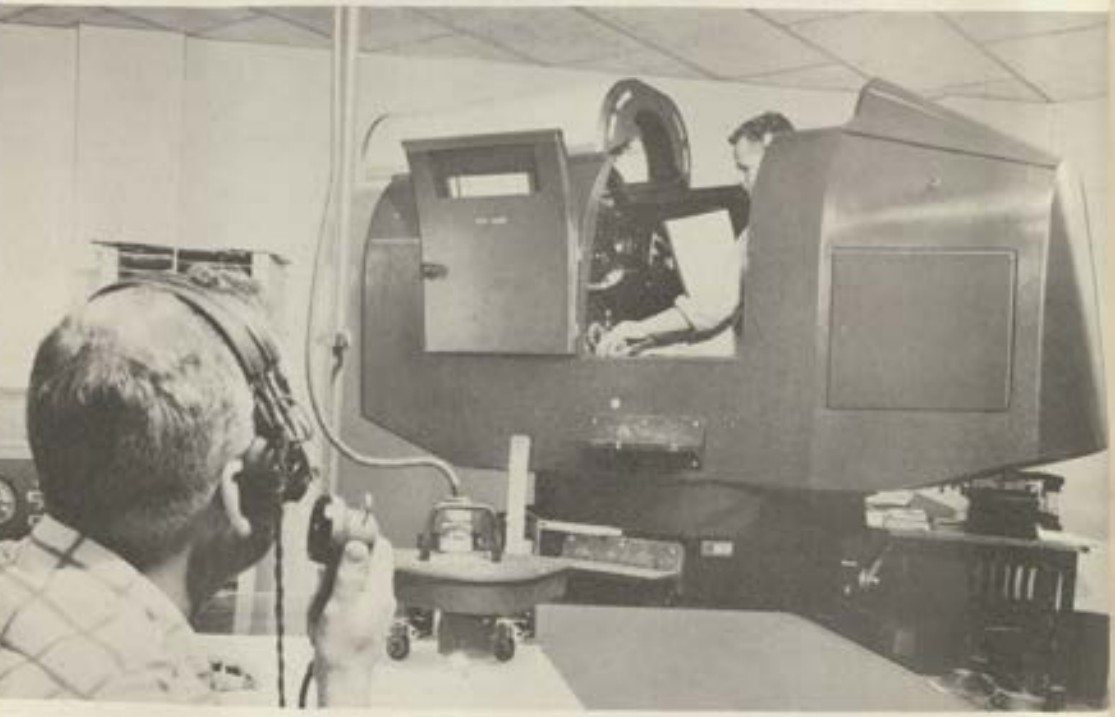
	Sem. Hrs. Credit
CS-11. Civil Air Regulations	1
MS-11. Meteorology	3
NS-11. Aerial Navigation	3
RS-11. Radio Navigation	2
GS-11. General Science and Safety Practices	3
FC-11. Basic Flying	1
FC-12. Maneuvers and Dual Cross Country	1
FC-13. Solo Cross Country and Radio Aids	1
FC-14. Maneuvers for Flight Test	1
FC-15. Introduction to Commercial Maneuvers	1
FC-16. Night and Transition Flight	1
FC-17. Instrument and Dual Cross Country	1
FC-18. Solo Cross Country	1
FC-19. Emergency Procedures	1
FC-20. Flight Test Preparation	1
IR-12. Instrument Ground School	3
IF-30. Instrument Link Instruction	1
IF-31. Instrument Flight Instruction	1

OPTIONAL: The following course is not required for graduation but its inclusion in the training program is highly recommended:

	Sem. Hrs. Credit
ME-40. Multi Engine	1

The "airman's world" is a fraternity of men reaching for the stars. They are the Winged Vikings of the Twentieth Century—highly remunerated and highly respected.

Embry-Riddle's flight training is conducted with over 40 single and multi-engine aircraft and four Link trainers. The quality and quantity of equipment is far beyond the requirements listed by the Civil Aeronautics Administration. Whether you are a beginner or a commercial pilot seeking higher ratings, you are given the same expert training under pilots who have been chosen for their efficiency, long years of experience in the air, and ingrained habits of safety aloft. Another safety factor is the Miami weather; contact flying conditions at Tamiami Airport exist 97% of the time.



COMMERCIAL PILOT COURSE

	Sem. Hrs. Credit
CS-11. Civil Air Regulations	1
MS-11. Meteorology	3
NS-11. Aerial Navigation	3
RS-11. Radio Navigation	2
GS-11. General Service and Safety Practices	3
FC-11. Basic Flying	1
FC-12. Maneuvers and Dual Cross Country	1
FC-13. Solo Cross Country and Radio Aids	1
FC-14. Maneuvers for Flight Test	1
FC-15. Introduction to Commercial Maneuvers	1
FC-16. Night and Transition Flight	1
FC-17. Instrument and Dual Cross Country	1
FC-18. Solo Cross Country	1
FC-19. Emergency Procedures	1
FC-20. Flight Test Preparation	1

INSTRUMENT PILOT

	Sem. Hrs. Credit
IR-12. Instrument Ground School	3
IF-30. Instrument Link Instruction	1
IF-31. Instrument Flight Instruction	1

MULTI ENGINE

	Sem. Hrs. Credit
ME-40. Multi Engine	1

DESCRIPTION OF SUBJECT MATTER

AERONAUTICAL

AE-13. AERODYNAMICS I *5 Credits*

Beginning with a study of the atmosphere and the fundamental dynamics and thermodynamics of air. Laminar and turbulent boundary layers and vortex motion. Development of lift drag and moment equations and their variation with Mach number and Reynolds number. Supersonic airfoil theory. Correlating factors influencing wing design. Theories of drag and their application. Momentum, blade element and vortex theories of propellers. Prerequesities: MA-16, ME-22.

AE-14. AERODYNAMICS II *5 Credits*

Static performance, including power required and power available for level flight, effect of weight and altitude or power climb performance, ceiling determination and time to climb. Special performance problems including take-offs and landings, range and endurance. Maneuvers such as spins, stalls, turning, gliding and diving. Theory of control surfaces and their design. Longitudinal stability and control. Lateral and directional stability and control. Prerequisite: AE-13.

AE-18. AIRFRAME LABORATORY *1 Credit*

Actual work with components of airframe and general aircraft structure and rigging.

AE-19. WIND TUNNEL LABORATORY *1 Credit*

Experiments on tunnel calibration, two dimensional wing pressure distribution and calculation of airfoil characteristics with and without flaps deflected, profile drag by the wake survey rake method, down wash and vortex motion for finite airfoil, wing flow visualization in two-dimensional smoke tunnel, laminar and turbulent boundary layer phenomenon. 3 hours laboratory; Prequisite: AE-13. Corequisite: AE-14.

AE-21. AIRCRAFT STRUCTURES I *5 Credits*

General procedures, equilibrium of forces, space structures, inertia forces and load factors, moment of inertia, mohrs circles, shear and bending moment diagrams, shear and bending stresses in symmetrical beams. Prerequisite: ME-18.

AE-22. AIRCRAFT STRUCTURES II *5 Credits*

A study of beams with unsymmetrical cross sections, analysis of typical members of semi-monocoque structures, spanwise air-load distribution, external loads in the airplane, mechanical properties of aircraft materials, analysis of joints and fittings. Prerequisite: AE-21.

AE-24. PRINCIPLES OF AIRPLANE DESIGN *3 Credits*

Types of airplanes and their design limitations and consideration. Wing design including airfoil and platform selection. Weight estimate. Power plant selection. Materials of construction. Detail de-

sign consideration. Landing gear design. Tail surface design. Control systems. Fuselage design. Preliminary performance calculations. Prerequisite: AE-13.

AE-25. AIRCRAFT DRAFTING *2 Credits*

General conventions. Layout drawings, detail drawings and assembly drawings. Local and general notes. Linework and lettering quality. Dimentioning conventions. Drafting of formed sheet metal parts, welded tube structures, mechanical parts, extrusions and standard aircraft parts. 6 hours drafting. Prerequisite: ME-12.

AE-26. AIRCRAFT DETAIL DESIGN *3 Credits*

Projects include structural and mechanical design and specification of shop processes. Selection of various AN and NAS standard parts. Design riveted, bolted and welded aircraft parts. Design control cable and swedged end-fitting, control push-pull rod with turnbuckle and end fittings and torque tube with hinge bearing. Select optimum skin thickness and stiffener spacing in wing two-cell box beam. Prerequisite: AE-21. Corequisite: AE-22.

AE-27. AIRPLANE DESIGN *3 Credits*

Design considerations; selection of configuration; arrangement of wing, landing gear, empennage, fuselage, cabin and engine. Gross weight estimate; engine and equipment selection; wing plan form determination; preliminary flight performance check; weight and balance drawing; airplane parasite drag estimation, selection of optimum airfoil and peak efficiency propeller; three view drawings; flap design and performance estimate; thrust horsepower required and available, versus velocity; maximum velocity, excess horsepower, rate of climb and ceiling; horizontal distance to take-off over a fifty-foot obstacle range and endurance. Prerequisite AE-13. Corequisite: AE-14.

AE-28. AIRCRAFT SYSTEMS LABORATORY *1 Credit*

Laboratory work with hydraulic, electric, propeller and fuel system mock ups and cutaways.

AE-29. AIRCRAFT PROPULSION SYSTEMS *3 Credits*

A study of piston, jet and rocket powerplants used in aircraft. Includes classification of engines and methods for optimum design and development. Major part of course is devoted to thermodynamic analysis of the piston engine, turbo-jet engine, pulse-jet engine, ram-jet engine and rocket motor. Prerequisite: MA-16.

AE-30. AIRCRAFT PROPULSION SYSTEMS LABORATORY *1 Credit*

Lab parallels theory of AE-29 Aircraft Propulsion Systems with actual laboratory work on engines.

AE-33. AIRCRAFT SPECIAL PROJECTS (Elective) *2 Credits*

A course designed to require the student to do original work in the field of Aeronautical Engineering Technology and related subjects. The student is assigned to a faculty member who directs the work of the student's activity toward a definite goal. The student designs and fabricates his project and presents a written and oral report.

ENGLISH — HUMANITIES

EH-11. COLLEGE ENGLISH

2 Credits

A course designed to build individual proficiency in handling all phases of composition. The student is required to demonstrate his abilities in creative writing, business correspondence, expository writing and long form reports. The importance of writing ability to the engineer is stressed.

EH-12. TECHNICAL REPORT WRITING

2 Credits

The student becomes familiar with and adept at handling all phases of industrial publication; including memorandum writing; staff studies; long form technical reports; advertising and illustrations, graphs, tables and charts; etc. Prerequisite: EH-11.

EH-13. INTRODUCTION TO ENGINEERING

2 Credits

Evaluation of the engineer and his place in society. Historical background of engineering profession. History of aviation. Development of Engineering Technology.

EH-14. PUBLIC SPEAKING

2 Credits

Fundamentals of voice production, improvement of vocal quality, pitch and intensity. Group and individual exercises for improving articulation and enunciation of speech sounds. Practice in analysis and delivery of various types of public speeches. Introduction in organization, phrasing and diction. Prerequisite: EH-11.

EH-15. PSYCHOLOGY

2 Credits

A thorough, penetrating discussion in adjustment and understanding, emphasizing their importance to the engineer. The study probes the fields of frustration responses, defense mechanisms, psychoses and neuroses, etc., relating them to personnel problems in industry.

EH-16. BUSINESS ENGLISH

2 Credits

Fundamental of business writing, commercial and government writing, employment correspondence and job application. Prerequisite: EH-11.

EH-18. ECONOMICS

2 Credits

Introduction of fundamental economic concepts, such as production, money, banking, labor, business organization international trade government fiscal policy, with primary emphasis upon the level and fluctuations in national income and employment. Current economic problems.

MATHEMATICS

MA-11. ALGEBRA *5 Credits*

Fundamental algebraic operations real and complex numbers, operations with polynomials and fractional expressions, equations, functions and graphs, inequalities, exponents, logarithms series and determinants.

MA-14. TRIGONOMETRY AND ANALYTICS *5 Credits*

Trigonometric functions, solution of right and oblique triangles, use of logarithms, trigonometric equations, De Moivre's Theorem and exponential and hyberbolic functions. Functions and graphs, lines, polynomials, conic sections, algebraic curves of higher degree, trigonometric, exponential and logarithmic curves, parametric equations. Corequisite: MA-11.

MA-15. DIFFERENTIAL CALCULUS *4 Credits*

Limits, differentiation of algebraic, trigonometric, logarithmic and exponential functions, applications of first and second derivatives and the differential. Prerequisite: MA-14.

MA-16. INTEGRAL CALCULUS *5 Credits*

Integration, application of the definite integral, trigonometric integrals, methods of integration, definite integral, approximate integral, first moment centroid, second moment radius of gyration, liquid pressure work, solid analytical geometry, partial derivative, multiple integral, infinite series, expansion of functions, differential equations. Prerequisite: MA-15.

MA-17. DIFFERENTIAL EQUATIONS (Elective) *3 Credits*

Treatment of ordinary differential equations including principle types of first and second order equations, simultaneous equations and linear equations, with constant coefficients. Applications to physics and mechanics. Prerequisite: MA-16.

MECHANICAL

ME-10. ENGINEERING DRAWING I *2 Credits*

Purpose and necessity of technical sketching to the engineer, classification of lines, hidden lines, precedence of lines, line quality, circles and arcs, ellipse, irregular curves, fillets and rounds, making a sketch, dimensions, measuring, cross-section paper, kinds of technical sketches, sketching by pictorial methods, exonometric oblique, perspective sketching from memory.

ME-11. ENGINEERING DRAWING II *2 Credits*

This part of the Engineering Course continues with the principles of the first course, extending the use of sectional views, auxiliary views and rotations. A comparison is made between the following methods of giving information: Orthographic projection, isometric, oblique and

perspective drawings. In this course there is introduced some of the elements of good design, manufacturing processes, standard dimensioning practices and principles of using detail and assembly drawings. Prerequisite: ME-10.

ME-12. DESCRIPTIVE GEOMETRY *2 Credits*

Principles of orthographic projection to the solution of three dimensional problems. Study of space relationships of points, lines and planes. Intersection and development of surfaces. Prerequisite: ME-11.

ME-15. MATERIALS AND PROCESSES *3 Credits*

A study of the fundamental nature of materials with emphasis on those used in the aircraft industry. Atomic structure, atomic bond, crystal structure, crystallization, engineering materials. Stress, strain and elasticity in materials. Various physical tests of materials, quality control and factor of safety. Composition to properties of wrought iron, steel and various alloys. Casting processes, powder metallurgy, heat treating and hot working processes, cold working processes, welding and allied processes. Machining, cleaning, plating and organic finishing of metals.

ME-16. STATICS

Fundamental concepts and definitions of forces, moments and couples; resultants of force systems; equilibrim of coplanar force systems; equilibrium of trusses and cables; friction. Prerequisites: MA-11, MA-14.

ME-17. DYNAMICS *5 Credits*

Motion of particle and rigid bodies, laws of motion, motion diagrams, work, energy, impulse and momentum. Prerequisite: ME-16. Corequisite: MA-16.

ME-18. STRENGTH OF MATERIALS *5 Credits*

Stresses and strain in tension, compression and sheer; riveted joints and welded joints, torsion of shafts, shear and moment in beam; stresses in beams; deflection of beams; fixed and continuous beams; beams of constant strength; combined stresses, columns; deflection of beams by area-moment method; Mohr's circle. Prerequisite: ME-17.

ME-22. FLUID MECHANICS *3 Credits*

Fluid properties and definitions, fluid statics, fluid-flow concepts and basic equations, viscous effects, Reynolds number, dimensional analysis and dynamic similitude, fractionless compressible flow and two dimensional ideal fluid flows. Prerequisites: PH-11, MA-11, MA-14.

ME-24. GENERAL SHOP PRACTICE LABORATORY *1 Credit*

Sheet-metal, welding, rivet, power grinding, power saw, nibbler, drill press, lathe, rolls, crimping machine. This course gives student working knowledge of basic shop procedures.

PHYSICS

PH-11. PHYSICS I, MECHANICS, HEAT SOUND *3 Credits*

Fundamentals of units and measurement, vector and scalar quantities, Newton's laws of motion and gravitation; friction, work, power; energy, torque rotational motion; momentum; curvilinear motion; vibratory motion; elastic properties of solids; molecular theory of matter; temperature, heat, thermodynamics; wave motion, sound.

PH-14. PHYSICS I, LABORATORY *1 Credit*

PH-12. PHYSICS II, ELECTRICITY, MAGNETISM, LIGHT AND MODERN PHYSICS *3 Credits*

Fundamental laws of electricity and magnetism, electric and magnetic field theory, electrostatics, direct and alternating currents, induced electromagnetic forces, capacitance, electric instruments, fundamentals of electronics; light, geometric and physical optics, interference, diffraction, spectra, polarized light; Relativity and Quantum Theory, Nucular Physics Atomic Energy. Prerequisite: PH-11, PH-14.

PH-15. PHYSICS II, LABORATORY *1 Credit*

PH-17. INTRODUCTORY MODERN PHYSICS (Elective) *2 Credits*

Discovery of the electron, atoms and the periodic table, X-rays, radioactivity, atomic and nuclear structure, photon collisions and atomic waves. Cosmic rays, nuclear reactions and decay, atomic accelerators, reactors, radiation effects. Prerequisite: PH-12, PH-15.

ADVANCED COURSES BACHELOR OF SCIENCE DEGREE IN AERONAUTICAL ENGINEERING

AE-17. AERODYNAMICS (SUPERSONIC)

Fundamental relations; flow in a duct; pressure, temperature, Mach number, and potential energy changes across normal and oblique shock waves; two dimensional flow around a corner and through a nozzle; supersonic wind tunnel design, analysis and testing methods; three-dimensional flow over various types of wing and fuselage combinations.

CH-11. CHEMISTRY I

Fundamental principles of chemistry; gas laws; mass and energy relationships in chemical changes; solutient factors affecting the rate and equilibrium of a chemical reaction; periodic system atomic structure, chemical reactivity of the elements.

CH-12. CHEMISTRY II

Introduction to inorganic chemistry. Chemical practice and theory of analytical separations, identifications and determinations. Metals of commercial importance. Semi-micro laboratory techniques; nuclear chemistry. Introduction to organic chemistry.

ME-20. THERMODYNAMICS I

Thermodynamics, ideal gases, mixtures of gases and vapors, combustion, theory of vapor engines and internal combustion engines.

ME-21. ADVANCED THERMODYNAMICS

Advanced study in thermodynamics; its application to modern gas turbines, jets, missiles and heat transfer.

MA-17. DIFFERENTIAL EQUATIONS

Treatment of ordinary differential equations including principal types of first and second order equations, simultaneous equations and linear equations, with constant coefficients. Applications to physics and mechanics.

EE-11. ELECTRICAL ENGINEERING

Fundamental principles of electric and magnetic circuits and the application of these principles to the theory and performance of direct and alternating current machines. A study of DC and AC circuits, vacuum tube characteristics and electronic devices.

EH-19. ECONOMICS II

A continuation of Economic I, which is a prerequisite.

EH-21. AMERICAN HISTORY

(1865 to the present). Reconstruction, the age of big business, the U. S. as a world power; World War I and II, the great depression and its aftermath studied in an interpretative survey.

EH-22. WORLD HISTORY

Designed primarily as a survey of the development and evolution of Western civilization covering the ancient and medieval periods from 1660 to the present. Some emphasis on contemporary civilization and culture.

EH-23. WORLD LITERATURE

A course on the backgrounds of the English language and literature; readings from selected masterpieces of the ancient, medieval and renaissance worlds.

EH-24. PHILOSOPHY

An integrated study of man and the concepts of his culture, including views about himself, society, philosophy and the arts.

ORIENTATION

W-1. ELEMENTARY ALGEBRA

Fundamental operations of basic intermediate and advance algebra; real numbers; polynomials; rational fractions; equations; quadratic equations; simultaneous equations; graphs.

W-2. PLANE GEOMETRY

Plane Geometry with emphasis on point line and surface problems, angles, triangles, polygons, circles, ellipses.

W-3. PHYSICS

A general introductory course covering the English and metric systems of measurement, principles of mechanics, heat, light, sound, electricity and magnetism, modern physics.

W-4. ENGLISH

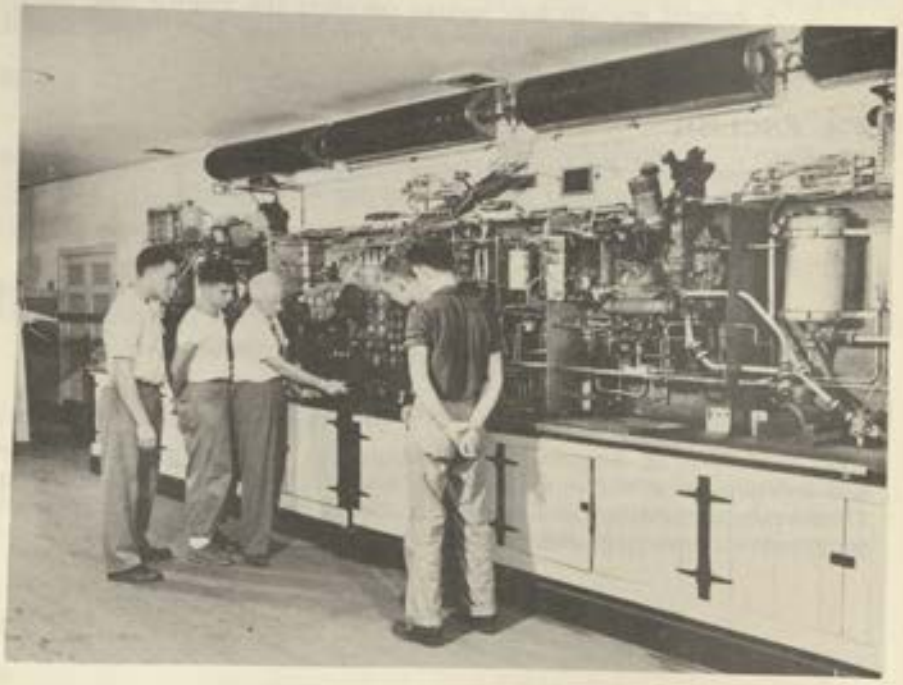
A survey of English fundamentals and mechanics stressing the importance of punctuation grammar, usage and spelling.

W-5. TRIGONOMETRY

Basic trigonometric functions, solution of right triangles, basic trigonometric identities, logarithms of trigonometric functions, tables and values of functions, laws of exponents and radicals.

W-6. AMERICAN HISTORY (Elective)

A study of American Civilization; the colonial period; conflict and independence; the union and national life; the west and Jacksonian Democracy; democracy and conflict; national growth and world politics; progressive democracy and foreign relations.



AIRFRAME AND POWERPLANT TECHNICIAN

FIRST SEMESTER

BASIC SCIENCE – 120 Clock Hours *5 Credits*

In the initial phase of your Airframe and Powerplant Technician training at Embry-Riddle, you will study shop mathematics, physics, aerodynamics, blueprint reading and mechanical drawing.

BASIC AIRFRAMES – 120 Clock Hours *5 Credits*

In addition to receiving sound theory in the construction of airframes, the practical portion of your training centers around the construction of an air foil capable of flight. From the selection of the material to be used, to the final coat of paint, you will follow the project through to completion.

Realizing that any technician is no better than the tools he works with, you will learn the proper care and use of hand tools, as well as the special tools normally required in the aviation industry.

SHEET METAL – 120 Clock Hours *4 Credits*

Since the majority of today's modern aircraft are covered with a metal "skin," it is essential that you develop a thorough mastery of sheet metal work you may be called upon to perform. From the selection and installation of the proper material, to the protective coatings and finishes, your training will be complete in accordance with Government requirements. Riveting, metal fasteners, and use of special tools are included. You will learn to estimate the amount of material and the types of equipment needed to complete the various projects assigned to you.

WELDING – 120 Clock Hours *4 Credits*

Prior to the practical training in arc and acetylene welding, you will study the various types of welding equipment. Before you can properly make repairs to the airframe, engine mounts, or other aircraft components, you must be thoroughly familiar with the gasses, nozzles and types of metal with which you will be working.

SECOND SEMESTER

BASIC POWERPLANTS — 240 Clock Hours *8 Credits*

To become a skilled technician, you must first develop a thorough understanding of the fundamentals of engine operation, inspection and repair. Embry-Riddle's years of experience in properly teaching these fundamentals will enable you to grasp the necessary knowledge in an easy to understand manner. Included in your study of basic powerplants are operating principles of the jet, turbo-prop and compound engines, as well as the gasoline engine. Names and functions of the important parts which make up these engines are also thoroughly covered. You will study proper inspection and disassembly methods, as well as the procedure for determining corrosion and fatigue. You will be quite surprised to see how rapidly you will understand the operation of each eype of powerplant.

CARBURETION — 120 Clock Hours *4 Credits*

Following your study of the engine, you will begin training with one of its most important accessories. From carburetors for 65 H.P. engines to fuel injection carburetors for 3,500 H.P. engines, your training will be complete. Your instruction will cover the operation principles, structural features and repair of the modern aircraft carburetor. The subject of carburetion is normally considered difficult, but modern training methods and equipment make this an easy subject to understand.

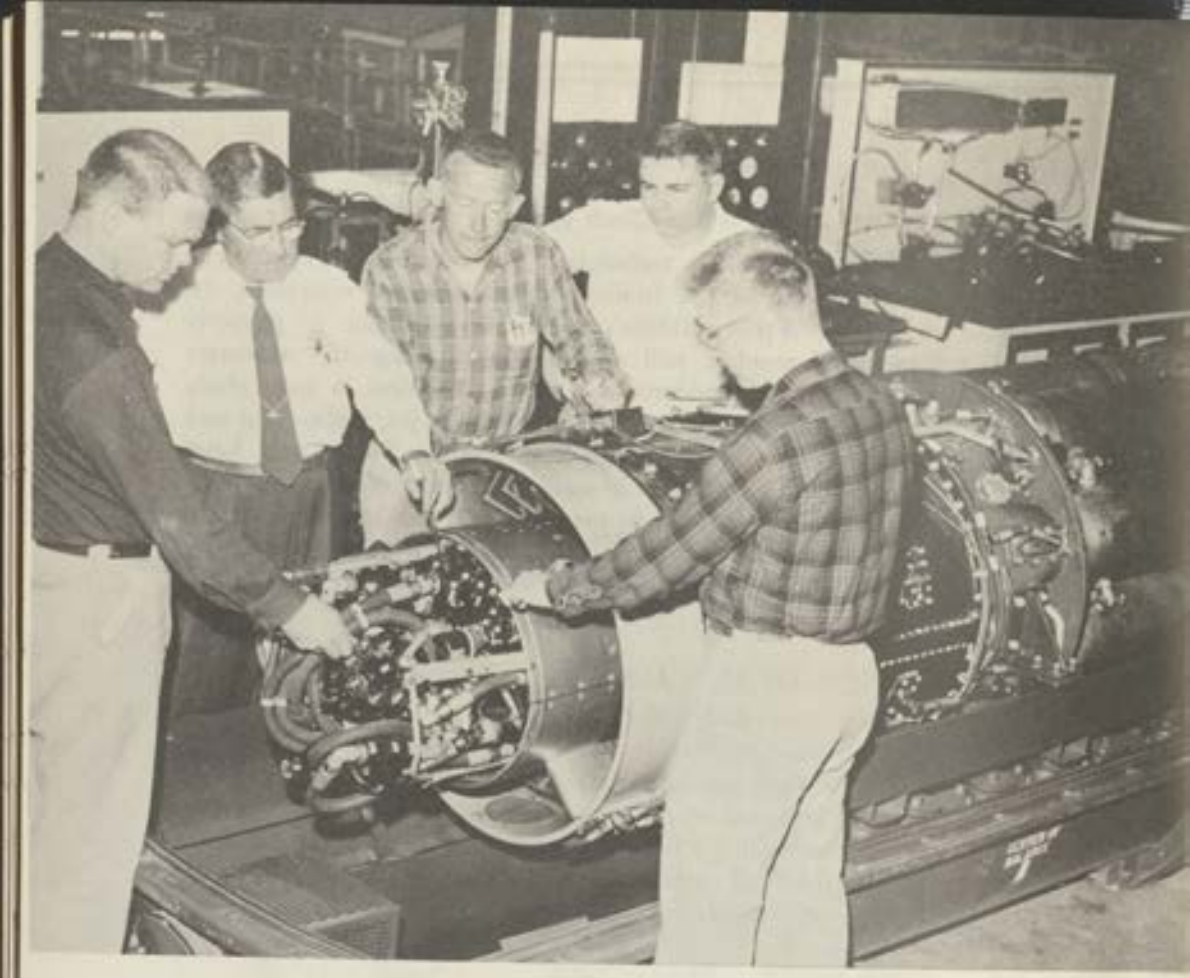
PROPELLERS — 120 Clock Hours *4 Credits*

In this phase of your Embry-Riddle training you will study thoroughly the various types of aircraft propellers; from small wooden propellers for light training planes to the massive, controllable pitch props used on the largest airliners. Electronic and hydraulic props, reversible pitch, feathering and synchronizing systems are all part of your training. Following this portion of your instruction, you will be capable of making the necessary adjustments, inspection and repair of any propeller now in use.

THIRD SEMESTER

HYDRAULICS — 120 Clock Hours *5 Credits*

Today's modern aircraft contain many hydraulic units. In this phase of your Embry-Riddle training, you will learn the proper procedures for installing, repairing and maintaining the hydraulic portions of the aircraft and its engines. Brakes, retractable landing gear and



A and P Technicians are employed wherever aircraft are built and flown, and the future demand seems to be unlimited. Employment with commercial airlines offers many opportunities for advancement to positions such as Flight Engineer which, in addition to excellent pay and security, also embrace retirement income plans and other benefits. Many A & P Technicians become "free lance" specialists for smaller airports, while others operate their own maintenance facilities for privately owned planes and business executive aircraft.

hydraulically operated control surfaces are but a few of the systems you will study. You will readily see how small hydraulic units ease the effort needed to control today's large and complicated aircraft.

ELECTRICITY — 120 Clock Hours *5 Credits*

Starting with the fundamentals of electricity and the various physics laws governing it, you will rapidly develop the background knowledge necessary to learn the correct methods of installing, servicing and inspecting the lighting systems, power units, starters, generators, magnetos and the many other electrical items found in every airplane. As in all other phases of Embry-Riddle Airframe and Powerplant Technician training, valuable classroom instruction in theory is firmly complemented by practical application in the shop.

ADVANCED POWERPLANTS — 240 Clock Hours *8 Credits*

This phase of your training marks your first work on "live" engines — engines that will actually be used for flight. Emphasis is placed on removal, inspection and parts replacement on all types and sizes of aircraft engines. You will now begin to utilize your knowledge of carburetion, electricity, propellers and hydraulics in conjunction with the aircraft engine. Valve and ignition troubles, timing, etc., are but a few of the many subjects that you will study. Upon completion of this phase, you will be able to inspect, repair or completely overhaul the types of engines in which you have had training.

FOURTH SEMESTER

ASSEMBLY AND RIGGING — 240 Clock Hours, 9 Semester Hours

The complete overhaul of an aircraft's airframe is the practical assignment for this phase. After disassembling an airframe to its smallest component part, you and you classmates will rebuild and inspect each intricate part until the airframe is completely reassembled. Imagine the thrill of seeing an airplane in the air and realizing that YOU have been instrumental in overhauling and rebuilding it and making it safe for flight.

FINAL AIRFRAMES AND POWERPLANTS — 240 Clock Hours, 3 Semester Hours

The importance of weight and balance, correct loading and safety precautions are covered in the final phase of your training at Embry-Riddle. Also, you will study the forms required by the Federal Aeronautics Administration, which you, as a licensed Technician must complete. School final examinations — written, oral and practical — are completed. On your last day of school you will be awarded the Embry-Riddle diploma, which you will covet as you are earning your way in this great and ever expanding Aviation Industry.

CS-11. CIVIL AIR REGULATIONS

1 Credit

This phase of ground school instruction covers in detail the Federal regulation affecting flight operations. Emphasis is placed on Part 1 3.20, 20, 43, 60 and 62 of these regulations. This part refers to certification of Aircraft, Pilots Certificates, General Operation Rules and Air Traffic rules in addition to the study of indentification markings of Aircraft, Airplane categories, etc.

MS-11. METEOROLOGY

3 Credits

Weather information as applied to aviation is studied in detail. Instruction is given in Weather recognition, Icing, Fog, Frontal characteristics, with particular emphasas on thunderstorms, General cloud formations and their relationship to weather characteristics, Weather maps and symbols, Teletype sequences and symbols, Elementary weather forecasting, Pressure areas and their characteristics, including motion of air masses (wind systems), Significance of isobaric patterns, Winds aloft, Humidity-temperature-dewpoint relationship and significance to pilot, Precipitation, Practical application of meteorological knowledge to safe flying practices and Services and assistance available from the U. S. Weather Bureau.

NS-11. AERIAL NAVIGATION

3 Credits

Study in this phase will include navigation methods of pilotage and dead reckoning; Navigational instruments commonly used; Use of computer; Proper use of flight plans; Proper use of published aids, such as: Flight Information Manual, Airman's Guide and Notams; Flight Assistance services. Landing and taking off in an airplane does not require near as much skill as the ability to fly from one point to another in the safest, most direct and most economical manner. For this reason, a great deal of time is spend in planning cross country flights utilizing all available aids.

RS-11. RADIO NAVIGATION *2 Credits*

Since many of today's navigation problems are solved through the use of radio equipment one phase of ground school training is devoted to this subject. This course covers all phases of aircraft radio from tuning the simplest receiver to familiarization with L/MF and VOR/VHF techniques and with the preparation and use of IFR flight plans.

GS-11. GENERAL SERVICE AND SAFETY PRACTICES *3 Credits*

Instruction in the following procedures and practices will be given: Care of aircraft, including preflight inspection procedures; general safety precautions; explanation of preventive maintenance, repair and required inspections. Care of engines, including preflight inspection procedures; fuel requirements; proper starting, warmup and shutdown procedures; explanation of preventive maintenance, repair, required inspection, use of operating manual; and functions, limitations and characteristic errors of instruments required under Part 43. Flight safety practices, including operation under conditions of high altitude, extreme temperatures, gross weight, icing (wing ice, propeller ice, carburetor ice); adverse surface conditions (rough, soft, slippery); turbulent air (mountain and canyon effects, surface obstruction and thermal effects); marginal visibility (day and night); radio communications failure; low fuel supply, aerodynamic effect of frost or snow on airfoils, maximum range versus maximum endurance operation, proper tie-down or securing of aircraft, emergency assistance and lost procedures; use of landing lights and flares; obstructions to flight, such as antennae, poles and birds; and procedure when operating unfamiliar aircraft.

FLIGHT COURSES

FC-11. BASIC FLYING – 16 Flight Hours *1 Credit*

In this phase first emphasis is in preparing and insuring the readiness of the aircraft for flight. After familarization with the aircraft is accomplished the student will begin the dual flight training necessary to reach flying proficiency for solo flight. Both dual and solo training within the traffic pattern will be stressed during this course.

FC-12. MANEUVERS AND DUAL CROSS COUNTRY – 16 Flight Hours *1 Credit*

Coordination, the ability to perform two dissimilar actions simultaneously, is skillfully developed and perfected in the student by the execution of carefully planned maneuvers. Turns, climbs, glides, stalls, slow flight and operations concerned primarily with control manipulation are fully mastered through both dual and solo flight. A dual cross country flight will normally be scheduled during this phase so that the student can demonstrate to his instructor his ability for solo cross country flights.

FC-13. SOLO CROSS COUNTRY AND RADIO AIDS – 16 Flight Hours *1 Credit*

Proper planning and execution of a solo flight utilizing all forms of navigation including radio aids. In addition to the flight hours in this course the student will receive 5 hours of instruction in the Link Trainer in preparation for basic instrument procedures.

FC-14. MANEUVERS FOR FLIGHT TEST – 16 Flight Hours *1 Credit*

The first portion of this course is devoted to control of the aircraft solely by reference to instruments. After the student has demonstrated his ability to maintain heading and altitude without visual reference to the ground he will practice the maneuvers necessary for his Private Pilot flight test.

FC-15. INTRODUCTION TO COMMERCIAL MANEUVERS 16 Flight Hours *1 Credit*

This course is devoted to dual and solo flight practice in the procedures and maneuvers necessary for a Commercial Pilot.

FC-16. NIGHT AND TRANSITION FLIGHT – 16 Flight Hours *1 Credit*

This course is designed to acquaint the student with the difference between day and night operation as well as transition to other aircraft, making use of flaps or other auxiliary devices whose effective usage must be mastered.

FC-17. INSTRUMENT AND DUAL CROSS COUNTRY — 16 Flight Hours *1 Credit*

This phase of the course is used to train the student in the proper procedure for instrument flight under certain conditions. Completion of this **WILL NOT** prepare the student to be an instrument pilot but will give him basic control procedures. Following this the student will make additional cross country flights.

FC-18. SOLO CROSS COUNTRY — 16 Flight Hours *1 Credit*

A long distance solo cross country flight is covered in this phase of the training. During this cross country flight it is necessary that the student make a minimum of 3 landings at least one of which is 350 miles from his original point of departure.

FC-19. EMERGENCY PROCEDURES — 16 Flight Hours *1 Credit*

Advanced maneuvers requiring the student to divide his attention, making good a fixed track over the ground, for example, or perhaps a quick change in flight plan due to weather or fuel supply. Unusual and emergnecy situations, such as engine failure, radio failure, being lost, icing conditions and many others are brought out in the training until safe reactions become instinct.

FC-20. FLIGHT TEST PREPARATION — 16 Flight Hours *1 Credit*

Extensive dual and solo practice in the maneuvers and procedures necessary for F.A.A. certification as a Commercial Pilot.

IR-12 INSTRUMENT GROUND SCHOOL *3 Credits*

A study of advanced meteorology, airport and airway traffic control, and navigational problems under instrument conditions and various methods of radio range orientation.

IF-30 INSTRUMENT LINK INSTRUCTION *1 Credit*

10 hours of simulated instruction on problems in Link Trainer with emphasis on holding pattern, let-downs and radio work.

IF-31. INSTRUMENT FLIGHT INSTRUCTION *1 Credit*

A minimum of 20 hours Dual instrument flight instruction covering the following: The skill of maintaining a selected altitude must be mastered; Rough air operation is included since turbulence is often present for at least a portion of an instrument flight; Following this the emphasis is on turns, controlling the rate of turn and controlling to a heading. The student must be able to maintain a selected aircraft altitude, and at the same time work a radio range orientation problem or perhaps compute an estimated time of arrival at a designated holding fix. Final emphasis is on acquiring the finesse of a smooth instrument approach. Missed approach procedures are also practiced.

ME-40. MULTI ENGINE *1 Credit*

A minimum of 10 flight hours in a Twin Engine Executive type aircraft. Training goes far beyond acquiring the skill to operate an aircraft having two engines, with particular emphasis placed on efficient and safe operation with one engine inoperative. In-flight problems, involving dual fuel supply considerations, are given thorough study. Also, appropriate Federal Air Regulations, such as use of V-1 and V-2 speeds in their application toward greater safety are fully covered in both theory and practice. Aerodynamic characteristics with all engines operating, and with one engine dead, are studied and applied to all conceivable situations.

EMBRY-RIDDLE AND UNIVERSITY OF MIAMI COMBINED COURSES OF AVIATION STUDY

Aviation Administration Including Business Pilot

TYPICAL PROGRAM OF STUDY

ENGLISH 111 Composition — *3 Credits*

The more complex problems of sentence structure and usage. Analysis of the modes of discourse. Practice in reading for adequate comprehension at the collegiate level, and in theme writing and analysis.

MATHEMATICS 101 Algebra and Trigonometry — *3 Credits*

Elementary properties of the real numbers considered as an ordered field, and of the trigonometric functions.

GOVERNMENT 141 Introduction to American Politics — *3 Credits*

Essential principles and processes of American political and governmental organization. Theoretical and historical foundations, and structure and organization of American political institutions.

MANAGEMENT 362 Air Navigation — *3 Credits*

The basic elements of air navigation including the practical application of pilotage, dead reckoning, and radio as applied to the safe flight of aircraft.

ORIENTATION 103 Orientation for Men — *3 Credits*

Designed to acquaint freshman men students with the history, traditions and program of the University and to guide them in their adjustment to University life. Emphasis is placed on degree requirements, methods of study and personal-social adjustment.

FLIGHT 363 60 Flight Hours — *1 Credit*

An introduction to flight with instruction and practice in basic flight maneuvers, cross-country piloting technique, use of navigational radio aids, and introduction to advanced flight maneuvers including emergency conditions and variable weather conditions affecting airplane performance.

ENGLISH 112 Composition — *3 Credits*

A refinement of the skills developed in English 111. Study of the various types of discourse used in college courses. Preparation for effective writing in all subsequent college work.

MATHEMATICS 125 Mathematics of Finance — *3 Credits*

Compound interest, annuities, bonds, depreciation, life insurance.

GOVERNMENT 142 Introduction to American Politics — *3 Credits*

Analysis of some major issues, problems, and policies of contemporary government and politics, with primary emphasis on the Government of the United States. Consideration of questions of foreign relations, civil liberties, financial policies, economic organization and functioning, and the relations of the individual to his government.

MANAGEMENT 361 Aviation Meteorology *3 Credits*

Interpretation of meteorological phenomena affecting the operation of aircraft. The use of weather data for safe flight conditions; analysis of weather maps and sequence reports for flight planning. Uses of meteorological data in airline management; effect on scheduling, route planning, air traffic control.

FLIGHT 364 65 Flight Hours *1 Credit*

Continuation of and intensive practice in advanced flight maneuvers. Introduction to control of aircraft solely by reference to instruments in both aircraft and synthetic (Link) trainers. Use of radio for precision cross-country flying, let-downs, orientation and establishing fixes.

MANAGEMENT 466 Technical Aspects of Aviation *3 Credits*

Practical, non-engineering, presentation of aircraft operating procedures relative to safe, economic, and efficient operation. Present and future needs of airline equipment; review of types of aircraft power; reciprocating, turbo-prop, jet and rocket.

ACCOUNTING 101 Fundamentals of Accounting *3 Credits*

For non-accounting majors as an aid to better management.

HISTORY 201 History of the United States to 1865 *3 Credits*

General survey of the political, social and economic development of the United States. The first semester begins with the period of discovery, exploration, and settlement, and carries the story through the Civil War.

BUSINESS LAW 212 Business Law Fundamentals *3 Credits*

Preliminary law, sources and administration; brief legal history; short survey of elementary legal concepts. Contracts. Nature and requisites in formation, operation, interpretation, discharge and remedies.

ECONOMICS 201 Economic Principles and Problems *3 Credits*

Basic course investigating the problems of the production of wealth, including pricing and business organization; the distribution of wealth; money, credit and banking; international trade; labor; public finance; economic organization of society.

MANAGEMENT 201 Principles of Management *3 Credits*

The general principles of management: planning; organization, control; location, equipment and maintenance of factory buildings; plant layout and machine arrangement, job analysis, motion and time study, production control, budgets and industrial cost.

FLIGHT 365 75 Flight Hours *1 Credit*

Advanced cross-country flight with emphasis on navigational technique and standards used in Business and Airline Flight operations. Fuel computations with varying load conditions. Continuation of practice in emergency procedures, coordination maneuvers and variable weather conditions.

ACCOUNTING 102 Fundamentals of Accounting *3 Credits*

Continuation of Accounting 101.

HISTORY 202 History of the U. S. Since 1865 *3 Credits*

Continuation of History 201.

MARKETING 200 Principles of Marketing *3 Credits*

The activities involved in the movement of goods from producer to consumer. Marketing institutions, functions and price policies discussed.

ECONOMICS 202 Economic Principles and Problems *3 Credits*

Continuation of Economics 201.

MANAGEMENT 202 Personnel Management *3 Credits*

Principles of scientific personnel management in factory, store and office; job analysis, description and classification; personnel selection, maintenance and training; promotion; labor turnover, working hours and wage policies; health and safety of employees; morale and interest.

FLIGHT 366 60 Flight Hours *1 Credit*

Advanced instrument flight training with emphasis on all phases of radio navigation, including let-downs, instrument approaches, precision turns and recovery from unusual attitudes in both aircraft and Link Trainers.

Business Pilot Multi-Engine flight training is also covered in this course, and the training goes well beyond acquiring the skill necessary to operate a twin engine aircraft. Multi-Engine training is actually broken down into three parts — first being the local field work and safe and efficient operation of the aircraft with one engine inoperative. The second part of the training involves multi-engine instrument flight problems which are thoroughly studied and learned. The final phase of the course involves extensive cross-country flight where marginal weather conditions may be encountered; on many occasions a group of students may be taken on one cross-country fight with each student having equal time at the controls. When not actually piloting the aircraft, the students are busy plotting fixes, estimating times of arrival, interpreting weather reports and going through all phases of efficient flight planning. All multi-engine training is given in the Twin-Beech (D18S), which is more widely used in the corporate field than any other aircraft.

PSYCHOLOGY 201 General Principles of Psychology *3 Credits*

The psychology of normal behavior.

BUSINESS STATISTICS 221 Elementary Business Statistics *3 Credits*

Collection of numerical data; discussion of sources of data; presentation through use of charts and tables. Calculation of measures of central tendency and measures of dispersion and their application to business problems.

FINANCE 301 Money and banking *3 Credits*

Nature and functions of money; credit and credit instruments; commercial banking; Federal Reserve System; monetary and fiscal policies; value of money; international monetary principles and problems.

MANAGEMENT 260 Principles of Transportation *3 Credits*

A broad basic survey of transportation industries; an examination and analysis of their responsibilities and functions in public service and as private institutions, including organization and management; cost and demand characteristics, equipment, financing, regulation and public policy. A contrast between surface and air transportation.

MANAGEMENT 368 Aviation Radar *3 Credits*

The practical use and description of radar as used in aviation. An understanding of airborne radar as required for weather avoidance, terrain mapping and navigational purposes.

PSYCHOLOGY 250 Applied Psychology *3 Credits*

Application of psychological principles to business, industry and professional fields.

BUSINESS ENGLISH 347 Business English *3 Credits*

The principles of writing business letters and reports; practical experience in writing sales, credit, collection, adjustment and application letters.

FINANCE 351 Business Finance *3 Credits*

The establishment, maintenance and financing of a business enterprise; earnings; financial expansions and consolidations; reorganization; the stock and commodity markets; machinery and regulation by the Securities and Exchange Commission.

ECONOMICS 311 Labor Economics-Labor Relations *3 Credits*

Introductory general survey of labor economics and labor relations. The labor problem and responses thereto. History, organization and operation of American trade unionism; collective bargaining; public control of labor relations. Alternative approaches, in theory and practice. Social insurance as a response to various aspects of the labor problem. Economics of the labor market, wage theory and income distribution. Legislative proposals.

MANAGEMENT 360 Air Transportation *3 Credits*

Historical development and present status of air transportation facilities; regulation, state and federal; economic and legal characteristics of the air transportation industry; problems and services of commercial air transportation.

MARKETING 403 Salesmanship *3 Credits*

The salesman in relation to his firm, his goods and his customers; the approach, demonstration and close of the individual sales transaction.

MANAGEMENT 467 Civil Air Regulations *3 Credits*

A comprehensive study of all Civil Air Regulations pertaining to and affecting both safety and economic regulations. This course covers necessary preparation for Federal Aviation Agency Administration written examinations.

ELECTIVES Student Choice of Electives *9 Credits*

MANAGEMENT 469 Legal Aspects of Aviation *3 Credits*

Survey of federal, state and local aspects of law relative to the air transportation industry; various legal problems (including taxation and insurance) encountered in aviation.

ELECTIVES Student Choice of Electives *12 Credits*

The above program is a suggested sample curriculum and subject to change by the University of Miami.


EMBRY-RIDDLE
INT'L SCHOOL OF AVIATION
N6287C
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WHERE WILL YOU BE 5 YEARS FROM TODAY?

Shifting from job to job, seeking the "right spot" and never finding it . . . or moving steadily ahead through specialized technical training to positions of responsibility?

The answer may well depend on the decision you make at this very moment!

The preceding pages set forth the opportunities in Aviation and how Embry-Riddle's specialized training can prepare you for immediate employment and a career that can lead to security and financial independence.

Wishful dreaming can never replace wise decisions. The weeks and months that pass you by can never be recaptured. The decision now rests with you . . . and we wish you Godspeed in your chosen career.