



# Errata

to the  
**1998-99**  
Undergraduate Catalog

*Effective Date: July 1, 1998, for the Daytona Beach  
and all Extended Campus Locations.*

**EMBRY-RIDDLE**  
AERONAUTICAL UNIVERSITY



Student Village

## Extended Campus

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dependents and local civilians.

Please refer to page 69 for further information on Veteran's Education benefits.

### CENTER FOR DISTANCE LEARNING

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As the network of resident centers grew, the identity of a new and unserved segment of the aviation population interested in higher education began to form. Early signs of this emerging group came from resident center students who were transferred to locations not served by a resident center before they had completed degree requirements. Later, the Campus began to receive inquiries from people working in aviation in small communities or isolated locales around the world which would never be able to support a resident center. Interest was expressed by workers for whom a regularly scheduled work day was an unfamiliar concept.

The Center for Distance Learning was organized and developed to extend the opportunity to earn an Embry-Riddle degree to anyone who was eligible for admission regardless of where they might be living.

The term for distance learning courses is 15 weeks. Undergraduate

terms begin every Friday (52 terms per year). Examinations in both undergraduate and graduate distance learning courses must be supervised by a proctor. Students must submit a proctor approval request form providing information about candidates they want to nominate as proctors. All proctors must be approved in accordance with established University policies and procedures.

The Center is approved for enrollment of undergraduate and graduate students eligible to receive education benefits from the Department of Veterans Affairs. Some tuition assistance for active duty military



# FINANCIAL INFORMATION

## Daytona Beach Campus

### FALL 1998/SPRING 1999 TUITION

Undergraduate	Engineering Programs	All Other Programs
1-11 credit hours	\$ 430 per credit hour	\$ 400 per credit hour
12-16 credit hours	\$ 5,160 per semester	\$ 4,800 per semester
Over 16 credit hours	\$ 430 per credit hour	\$ 400 per credit hour

Students whose undergraduate course loads during Fall or Spring semesters are greater than 16 hours are charged the semester rate listed above plus a per-credit-hour charge for those credit hours over 16.

Graduate	Engineering Programs	All Other Programs
	\$ 450 per credit hour	\$ 425 per credit hour

Engineering degree programs include the bachelor of science programs in aerospace engineering, civil engineering, and engineering physics, and the master of science in aerospace engineering/master of aerospace engineering, and the master of software engineering program. The computer science and the master's of software engineering programs are included in the engineering grouping for the purpose of charging tuition.

### SUMMER 1999 TUITION

Undergraduate	Engineering Programs	All Other Programs
	\$ 380 per credit hour	\$ 360 per credit hour
Graduate	Engineering Programs	All Other Programs
	\$ 400 per credit hour	\$ 370 per credit hour

There is no term rate for Summer. Summer tuition rates are determined solely by the number of credit hours per term. Each Summer term is billed separately.

Bills for tuition and fees, issued at the end of registration, are payable on the first day of class. If full payment cannot be made by this date, tuition payment agreements on outstanding balances are available at the rate of 1.5% per month. Tuition payment agreements are available in the Student Accounting Office.

### AVMT LABORATORY COSTS

In addition to academic credit hour tuition, students enrolled in AVMT courses pay a materials/equipment fee at 1/4 credit hour rate for each hour of laboratory.

### FLIGHT TRAINING COSTS

Students enrolled in flight courses pay for flight training.

# Financial Information

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## *Commercial Pilot Certification Program*

### **All Incoming Students Without Private Pilot Certificate**

This Commercial Pilot Certification Program includes a Private Pilot Certificate, Commercial Certificate with Instrument and Multi-Engine Ratings and will be the required funding program for incoming students without a Private Pilot Certificate in flight related degree programs. This FAA certified program curriculum contains over 345 combined hours of ground instruction, flight instruction and solo practice time. We will offer the program described at a fixed, not to exceed, price of \$21,770 (including a one-time non-refundable administrative fee of \$100)\*.

This price comes packaged with an exclusive financing program providing the following options:

1. 35 consecutive monthly payments of \$622.00, or
2. \$170 down and six consecutive semester payments of \$3600.00.

### **All Incoming Students With Private Pilot Certificate**

This Commercial Pilot Certification Program includes a Commercial Certificate with Instrument and Multi-Engine Ratings and will be the required funding program for incoming students with a Private Pilot Certificate in flight related degree programs. The FAA certified program curriculum contains over 232 combined hours of ground instruction, flight instruction and solo practice time. We will offer the program described at a fixed, not to exceed, price of

\$17,780 (including a one-time non-refundable fee of \$100)\*. This price comes packaged with an exclusive financing program providing the following options:

1. 28 consecutive monthly payments of \$635.00, or
2. five consecutive semester payments of \$3556.00

The University reserves the right to remove any student from the Commercial Pilot Certification Program in the event that a management review, evaluation, and/or plan of action fails to resolve any unsatisfactory training circumstances.

In such case, total student training costs will be calculated at current training rates and the difference between the calculation and the total payments made by the student will be debited/credited to the student's University account. All students beginning the Commercial Pilot Certification Program will come under the fixed, not to exceed price plan with the exception of those students that have over 45 academic hours accumulated towards their degree prior to beginning their flight training. These students will pay for their flight courses by deposit.

\*Not to exceed price and payments may be adjusted pending FAA approval of flight training curriculum hours per new regulatory requirements.

## **FLIGHT COURSE DEPOSITS FOR CONTINUING AND TRANSFER STUDENTS**

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Continuing students who are not in the commercial pilot certification program under

## Financial Information

the fixed, not to exceed price plan are required to make a separate deposit for each course to cover hourly flight fees for aircraft, simulators, and flight instructors. Also, courses in addition to commercial pilot certification program are paid by deposit. Deposit schedules are reviewed periodically and are based on averages of actual costs to complete each flight course. Actual costs are based upon total flight training hours accumulated.

AS 131	Aeronautics I Flight Lab (Private)	5700.00
AS 231	Aeronautics II Flight Lab (Instrument)	4500.00
AS 271	Aeronautics III Flight Lab (Commercial)	14400.00
AS 345	Multi-Engine Class Rating	3800.00
AS 417	FLight Training Methods and Curriculum Analysis	4200.00
AS 430	Turboprop Techniques and Crew Procedures (B-1900)	3525.00
AS 470	Airline Flight Crew Techniques and Procedures	4600.00

### HOURLY FLIGHT RATES

Since students progress at different rates in flight courses, actual costs for flight courses that require a deposit are computed at the completion of each course. These costs are calculated by multiplying the number of training hours completed by the appropriate hourly rate and adjusting the student's account accordingly. Students can request updates on their financial status in the course at any time.

Type Aircraft*	Solo	Dual
Non-complex Single Engine	\$ 60/hour	\$ 95/hour
Complex Single Engine Multi-engine	\$ 85/hour	\$120/hour

Seminole	\$160/hour	\$195/hour
Flight Simulator (Single Engine)	\$ 20/hour	\$ 55/hour
Flight Simulator (Multi-engine)	\$ 55/hour	\$ 90/hour
Oral Instruction	\$ 35/hour	

\* A fuel charge adjustment may be made as fuel prices vary.

### ROOM, BOARD, AND FEES

The following fees will be incurred each semester by any student attending the Daytona Beach campus and should be used when estimating the cost of attendance.

#### Housing

All freshmen and sophomore students with less than 58 earned credit hours are required to live in University-managed housing and first year freshmen are required to participate in the ERAU Dining Services meal program.

On-campus housing, standard double occupancy (per semester)	\$1,350
On-campus housing, privacy or efficiency apartments (per semester)	\$1,550

#### Dining Services

The Daytona Beach campus provides two meal plan options. Meal plans begin with the first day of orientation and end with the last day of final examinations. The 12 meal per week plan is required of all entering freshmen for the first two semesters of attendance. In addition to the meal plans, students may use Eagle Dollars at any dining service location. Please refer to

# Academic Programs

## TYPE 147 AMT/AVIONICS

### FIRST YEAR

Course	Title	Credits
AVMT 112	Aviation Regulations, Records and Documents	2
AVMT 113	Aircraft Familiarization and Flight Line Operations	2
AVMT 114	Aviation Materials	2
DET 111	Engineering Graphics	2
EET 105	Direct and Alternating Current Fundamentals Circuit Analysis	4
EET 106	Direct and Alternating Current Laboratory	1
HU	Lower Level Humanities	3
HU 122	English Composition and Literature	3
MA 111	College Mathematics for Aviation I	3
MA 112	College Mathematics for Aviation II	3
PS 103	Technical Physics I	3
SS	Lower Level Elective	3
<b>Total Credits</b>		<b>31</b>

### SECOND YEAR

Course	Title	Credits
AVMT 211	Introduction to Aircraft Electrical Systems	2
AVMT 212	Aircraft Sheet Metal Structures Fabrication	2
AVMT 213	Aircraft Instruments and Com/Nav Systems	2
AVMT 214	Aircraft Composite Structures	2
AVMT 215	Classic Airframe Structures	2
AVMT 216	Airframe Instructions and Rigging	2
CS 223	Scientific Programming in C	3
EET 205	Microelectronics Fundamentals and Circuit Analysis	4
EET 206	Microelectronics Laboratory	1
EET 210	Digital Circuits and Systems Analysis	4
EET 211	Digital Circuits Laboratory	1
EET 219	Pulse Component Laboratory	1
EET 220	Pulse Components and Circuit Applications	2
HU 219	Speech	3
PS 104	Technical Physics	3
<b>Total Credits</b>		<b>34</b>

### THIRD YEAR

Course	Title	Credits
AVMT 221	Introduction to Aircraft Powerplants	2
AVMT 222	Aircraft Power Plant Systems	2
AVMT 223	Engine Electrical and Ignition Systems	2
AVMT 311	Aircraft Environmental and Fuel Systems	2
AVMT 312	Aircraft Fluid Power Systems	2
AVMT 313	Aircraft Electrical Systems	2
AVMT 321	Aircraft Line Maintenance	3

EET 215	Electronics Communications Systems	3
EET 216	Electronics Communications Laboratory	1
EET 226	Microprocessor Systems	3
EET 227	Microprocessor Laboratory	1
HU	Upper Level Elective	3
HU 221	Technical Report Writing	3
SS	Upper Level Elective	3
<b>Total Credits</b>		<b>32</b>

### FOURTH YEAR

Course	Title	Credits
	Upper Level Elective	3
AVMT 224	Propellers and Propeller Systems	3
AVMT 322	Reciprocating Engine Overhaul	3
AVMT 323	Turbine Engines and Systems	3
AVT 303	Pulse Systems	3
AVT 305	Avionics Laboratory	2
AVT 310	Aircraft Surveillance Systems	3
AVT 312	System Integration	3
AVT 315	Advanced Avionics Laboratory	2
AVT 320	Aircraft Communications Systems	3
AVT 325	Aircraft Navigation and Landing Systems	3
<b>Total Credits</b>		<b>31</b>
<b>TOTAL DEGREE CREDITS</b>		<b>128</b>

## AVIONICS/FLIGHT

### FIRST YEAR

Course	Title	Credits
AS 130	Aeronautics I	4
AS 131	Aeronautics I Flight Lab	2
AS 201	Meteorology I	3
CS 223	Computer Programming in C	3
DET 111	Engineering Graphics	2
EET 105	Direct and Alternating Current Fundamental Circuit Analysis	4
EET 106	Direct and Alternating Current Laboratory	1
HU	Lower Level Humanities	3
HU 122	English Composition and Literature	3
MA 111	College Mathematics for Aviation I	3
MA 112	College Mathematics for Aviation II	3
<b>Total Credits</b>		<b>31</b>

### SECOND YEAR

Course	Title	Credits
AS 230	Aeronautics II	3
AS 231	Aeronautics II Flight Lab	2
AS 270	Aeronautics III	3
AS 271	Aeronautics III Flight Lab	1
EET 205	Microelectronics Fundamentals and Circuit Analysis	4

# Academic Programs

EET 206	Microelectronics Fundamental Laboratory	1
EET 210	Digital Circuits and Systems Analysis	4
EET 211	Digital Circuits Laboratory	1
EET 219	Pulse Components and Circuit Laboratory	1
EET 220	Pulse Components and Circuit Applications	2
HU 219	Speech	3
PS 103	Technical Physics I	3
PS 104	Technical Physics II	3
<b>Total Credits</b>		<b>31</b>

## THIRD YEAR

Course	Title	Credits
AS 309	Basic Aerodynamics	3
AS 310	Aircraft Performance	3
AS 352	Meteorology II	3
AS 357	Flight Physiology	3
EET 215	Electronics Communications Systems	3
EET 216	Electronics Communication Laboratory I	1
EET 226	Microprocessor Systems	3
EET 227	Microprocessor Laboratory	1
HU 221	Technical Report Writing	3
HU	Upper Level Elective	3
SS	Lower Level Elective	3
<b>Total Credits</b>		<b>29</b>

## FOURTH YEAR

Course	Title	Credits
AS 408	Flight Safety	3
AS 417	Flight Training Methods and Curriculum Analysis OR	3
AS 340	Instructional Design in Aviation OR	3
AS 430	Beech 1900 Flight Simulator AND	3
AS 420	Flight Technique Analysis	3
AVT 303	Pulse Systems	3
AVT 305	Avionics Laboratory	2
AVT 310	Aircraft Surveillance Systems	3
AVT 312	System Integration	3
AVT 315	Advanced Avionics Laboratory	2
AVT 320	Aircraft Communications Systems	3
AVT 325	Aircraft Navigation and Landing Systems	3
SS	Upper Level Elective	3
	Upper Level Elective	3
<b>Total Credits</b>		<b>31 or 33</b>
<b>TOTAL DEGREE CREDITS</b>		<b>122/124</b>

\*Embry-Riddle courses in the general education categories *Communication Theory and Skills*, *Humanities* and *Social Sciences* may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified above in the Aviation Maintenance and Technology vertical outlines.

### COMMUNICATION THEORY AND SKILLS:

HU: 122, 219, 221, 222.

### HUMANITIES:

LOWER LEVEL: HU 140, 141, 145

UPPER LEVEL: HU 300, 305, 310, 320, 325, 330, 335, 341, 345, 399, 499.

### SOCIAL SCIENCES:

LOWER LEVEL: EC 200, 210, 211 (EC 200 is not acceptable together with EC 210 or EC 211 or their equivalent),

PSY 220,  
SS 110, 120, 204, 210.

UPPER LEVEL: EC 310, 312, 315, 420, SS 302, 305, 310, 320, 325, 331, 335, 340, 350, 352, 399, 499.

# Academic Programs

Physical and Life Sciences* - One course must include a lab.	6
At Daytona Beach, one course must be either chemistry or physics.	
Humanities Lower level course*	3
Social Sciences Lower level courses*; one course must be economics	6
Humanities/Social Sciences* - Upper level course	3
<b>Total Credits</b>	<b>36</b>

## PROGRAM SUPPORT: ( AMT only)

MA 222 Business Statistics OR	
MA 211 Statistics with Aviation Applications	3
MA 320 Decision Math	3
<b>Total Credits</b>	<b>6</b>

## BUSINESS CORE:

BA 201 Principles of Management	3
BA 210 Financial Accounting	3
BA 212 Advanced Financial Accounting	3
BA 221 Advanced Computer Based Systems	3
BA 311 Marketing	3
BA 312 Managerial Accounting	3
BA 314 Human Resource Management OR	3
BA 317 Organizational Behavior	3
BA 320 Business Information Systems	3
BA 324 Aviation Labor Relations	3
BA 325 Social Responsibility and Ethics	3
BA 332 Corporate Finance	3
BA 335 International Business	3
BA 390 Business Law	3
BA 419 Maintenance Management	3
BA 420 Management of Production and Operations	3
BA 422 Life Cycle Analysis for Systems and Programs	3
BA 424 Project Management	3
EC 315 Managerial Economics	3

**Total Credits** 42-48

Avionics only

AMT only

**Total Degree Requirements** 126-138

\*Embry-Riddle courses in the general education categories of *Communication Theory and Skills*, *Mathematics*, *Computer Science*, *Physical and Life Sciences*, *Humanities*, and *Social Sciences* may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified above in the Aviation Maintenance Management vertical outline. Other courses may also be used with permission of the Undergraduate Program Chair.

## COMMUNICATION THEORY AND SKILLS:

HU 122, HU 219, HU 221, 222, HU 319, HU 351-420

## MATHEMATICS:

MA 111-112, MA 120-220, MA 140-145, MA 241-243

## COMPUTER SCIENCE:

BA 120, CS 101-114

## PHYSICAL AND LIFE SCIENCES:

PS 101-109, PS 142, PS 302, PS 304, PS 308, PS 309

## HUMANITIES:

- LOWER LEVEL:

HU 130-135, HU 140-146, HU 150-159, HU 250

UPPER LEVEL: HU 300-420.

## SOCIAL SCIENCES:

- LOWER LEVEL:

SS 110-130, SS 204, SS 210., EC 200-211, PSY 220

UPPER LEVEL: SS 302-360

## Required For Avionics only:

Mathematics:	MA 241 and MA 222	7
Computer Science:	CS 223	3
Physical Science:	PS 101 and PS 103	6

## Suggested Program of Study

Courses sponsored by the Department of Technology (AMT or Avionics courses) may be taken prior to taking academic courses or as part of the normal semester's academic program of study. The Department of Technology Undergraduate Program Chair and/or advisor will assist the student in determining the best way to arrange the course schedule. Academic requirements are suggested below:

### AMT:

Dept. of Technology-AMT Coursework 36-48

### FRESHMAN YEAR

Communication Theory and Skills*	3
Lower level Humanities*	3
Lower level Social Science*	3
Computer Science*	3
Mathematics*	6
Physical and Life Sciences*	3
BA 201 Principles of Management	3
BA 221 Advanced Computer Based Systems	3
EC 210 Microeconomics	3
<b>Total Credits</b>	<b>30</b>

### SOPHOMORE YEAR

Communication Theory and Skills*	6
Physical and Life Sciences*	3
BA 210 Financial Accounting	3



## Academic Programs

BA 212	Advanced Financial Accounting	3
BA 314	Human Resource Management OR	
BA 317	Organizational Behavior	3
BA 320	Business Information Systems	3
MA 222	Business Statistics	3
MA 320	Decision Mathematics	3
<b>Total Credits</b>		<b>27</b>

### JUNIOR YEAR

	Upper level Humanities or Social Sciences*	3
BA 311	Marketing	3
BA 312	Managerial Accounting	3
BA 324	Aviation Labor Relations	3
BA 325	Social Responsibility and Ethics	3
BA 332	Corporate Finance	3
BA 390	Business Law	3
EC 315	Managerial Economics	3
<b>Total Credits</b>		<b>24</b>

### SENIOR YEAR

BA 419	Maintenance Management	3
BA 420	Management of Production and Operations	3
BA 422	Life Cycle Analysis for Systems	3
<b>Total Credits</b>		<b>9</b>
<b>Total Degree Requirements</b>		<b>126-138</b>

### AVIONICS:

Dept. of Technology-Avionics Coursework	48
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### FRESHMAN YEAR

	Communication Theory and Skills*	3
	Lower level Humanities*	3
	Lower level Social Science*	3
	Computer Science*	3
	Mathematics*	7
	Physical and Life Sciences*	3
BA 201	Principles of Management	3
EC 210	Microeconomics	3
<b>Total Credits</b>		<b>28</b>

### SOPHOMORE YEAR

	Communication Theory and Skills*	6
	Physical and Life Sciences*	3
BA 210	Financial Accounting	3
BA 212	Advanced Financial Accounting	3
<b>Total Credits</b>		<b>15</b>

### JUNIOR YEAR

	Upper level Humanities or Social Sciences*	3
BA 311	Marketing	3
BA 312	Managerial Accounting	3
BA 314	Human Resource Management OR	
BA 317	Organizational Behavior	3
BA 324	Aviation Labor Relations	3
BA 325	Social Responsibility and Ethics	3
BA 332	Corporate Finance	3
BA 335	International Business	3
<b>Total Credits</b>		<b>24</b>

### SENIOR YEAR

BA 419	Maintenance Management	3
BA 420	Management of Production and Operations	3
BA 422	Life Cycle Analysis for Systems	3
BA 424	Project Management	3
		12
<b>Total Degree Requirements</b>		<b>129</b>

## *Management of Technical Operations*

Bachelor of Science

### DEGREE REQUIREMENTS:

The Bachelor of Science in Management of Technical Operations requires successful completion of 120 credit hours. Designed for the student who possesses some technical expertise either through previous course work, licensing or experience, this degree provides the student a flexible yet solid business program. The degree allows a minimum of 15 semester hours earned in an area of technical operations or through CLEP, DANTEs, or military or industrial education programs recognized by the American Council on Education. In addition, credit may be granted for aviation-related licenses such as A&P or flight ratings as well as equivalent supervisory experience. Supervisory experience, however, must be no less than 5 years in a mid-level position.

TECHNICAL SPECIALTY	15
GENERAL EDUCATION	36
PROGRAM SUPPORT	6
BUSINESS CORE	33
TECHNICAL MANAGEMENT CORE	12
SPECIFIED ELECTIVES	9
OPEN ELECTIVES	9
<b>Total Degree Requirements</b>	<b>120</b>

Students at Extended Campus may substitute additional specified elective courses and/or open electives courses.

TECHNICAL SPECIALTY:	15
GENERAL EDUCATION:	

Communication Theory & Skills*	9
Mathematics*	6

# Academic Programs

These adjustments apply only to the Associate in Science and are not transferable to the Bachelor of Science in Professional Aeronautics curriculum. All of the credits completed using the adjustments and applied to the requirements of the Associate in Science may not fit within the minimum credits required for the Bachelor of Science.

The Type 65 courses are for those who do not possess the FAA Airframe and/or Powerplant Certificate. Students who possess the Airframe OR Powerplant Certificate may take the Type 65 courses that pertain to the certificate they do not possess.

The adjusted curriculum requires 75 credit hours to complete the Associate in Science.

## PROFESSIONAL AERONAUTICS CURRICULUM

The curriculum to be followed by each student depends on the amount of aeronautical technology credit granted and whether the objective is the associate or bachelors' degree. The column of numbers on the right specifies the requirements for the Bachelor of Science.

CURRICULUM	A.S.	B.S.
<b>Aeronautical Technology Credit (Maximum)</b>	18	36
<b>Aeronautical Science</b>		
AS 254 Aviation Legislation	3	3
AS 405 Aviation Law	3	3
<b>Communication Theory and Skills</b>	9	9
<b>Humanities/Social Sciences*</b>		
Lower Level Humanities	3	3
Upper Level Humanities or Social Sciences		3
Lower Level Social Sciences	3	3
<b>Computer Science/Mathematics</b>		
CS 109 Introduction to Computers and Applications <b>OR</b>		
BA 120 Introduction to Computer Based Systems		3
MA 111 College Math for Aviation I	3	3
MA 112 College Math for Aviation II <b>OR</b>		
MA 320 Decision Mathematics		3
MA 211 Statistics with Aviation Applications <b>OR</b>		
MA 222 Business Statistics	3	3

CURRICULUM	A.S.	B.S.
<b>Physical Sciences</b>	3	6

Physical science, chemistry, physics, earth science, astronomy, geology, biology, zoology, or physiology courses.

One course must include a lab.

<b>Economics/Management</b>		
EC 210 Microeconomics	3	3
EC 211 Macroeconomics		3
BA 201 Principles of Management	3	3
BA 210 Financial Accounting I		3

**Specified Electives (select from the list following)** 3 21

**Open Electives (any discipline)** 3 15

**TOTAL DEGREE CREDITS** 63 126

Either EC 210 or EC 211 satisfies the requirements of the associate degree curriculum.

Either MA 112 or MA 211 satisfies the requirement of the associate degree curriculum.

\*Embry-Riddle courses in the general education categories of *Communication Theory and Skills*, *Humanities*, and *Social Sciences* may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified in the Professional Aeronautics vertical outline.

### COMMUNICATION THEORY AND SKILLS:

HU 122, 143, 219, 221, 222

### HUMANITIES:

LOWER LEVEL: 100 - 200 level

UPPER LEVEL: 300 - 400 level

### SOCIAL SCIENCES:

LOWER LEVEL: 100 - 200 level

UPPER LEVEL: 300 - 400 level

### SPECIFIED ELECTIVES:

AS 305\*, AS 309\*, AS 310\*, AS 311\*, AS 340\*, AS 352\*, AS 357, AS 402\*, AS 409, AS 410\*, AS 412;

AT 363\*, AT 365\*, AT 462\*, AT 464\*

BA 308, BA 311, BA 312, BA 314, BA 317, BA 320, BA 322, BA 324, BA 325, BA 331, BA 332, BA 390, BA 405, BA 408, BA 410, BA 415, BA 419, BA 420\*, BA 421\*, BA 425\*, BA 426\*, BA 427\*, BA 428\*, BA 433\*;

EC 315, EC 410

SF 320, SF 330, SF 335, SF 345, SF 435, SF 445.

\*These specified electives are offered only on the Daytona Beach Campus.

Dependent on the amount of upper-level Aeronautical Technology credit applied, some of the open or humanities/social science electives in the B.S. degree may have to be 300-400 level courses to satisfy the graduation requirement of 40 credits of upper-level courses.

Cooperative Education credits may be used as open electives; however, assignments may not be in the student's occupational specialty.

# Course Descriptions

## MA 112

### College Mathematics for Aviation II (3,0)

#### 3 Credits

Basic calculus designed for the student of aviation. Differentiation and integration of algebraic functions; applications to velocity, accelerations, area, curve sketching and computation of extreme values. Prerequisite: MA 111.

## MA 120

### Quantitative Methods I (3,0)

#### 3 Credits

A pre-calculus/statistics course with applications to business and economics. Fundamental algebraic operations, linear, quadratic, logarithmic and exponential functions, graphs, systems of linear equations, simple and compound interest, amortization and descriptive statistics. Prerequisite: MA-006 or placement.

## MA 125

### Space Mathematics (3,0)

#### 3 Credits

Units of measure used in Space Technology, launch and re-entry velocities and accelerations, force and acceleration of gravity on the moon and on an asteroid, "g forces" on an astronaut, analysis of the behavior of sounding rockets both when launched and when returned to earth, the reliability of spacecraft systems, multi-stage rocket design, tracking of model rockets, investigation of the movement of celestial bodies on the celestial highways. Prerequisite: MA 111.

## MA 140

### College Algebra (3,0)

#### 3 Credits

Fundamentals of exponents, radicals, linear, quadratic and absolute value equations, inequalities and complex numbers. Introduction to functions, curve sketching, elementary theory of equations, sequences and series, matrix algebra and systems of equations. Prerequisite: MA 006, MA 106, or Placement.

## MA 142

### Trigonometry (3,0)

#### 3 Credits

Trigonometric functions and their graphs; identities; radian measure with applications; compound, half and double angle identities; solving elementary trigonometric equations, right and oblique triangles; law of sines and cosines; exponential, logarithmic

and inverse trigonometric functions; vectors and trigonometric form of a complex number.

Prerequisites: MA 006, MA 106, or Placement.

Corequisite: MA 140.

## MA 145

### College Algebra and Trigonometry (5,0)

#### 5 Credits

Fundamentals of exponents, radicals, linear and quadratic equations, inequalities, elementary theory of equations, sequences and series, functions, exponential, logarithmic and trigonometric functions, radian measure, trigonometric identities and equations, vectors, laws of sines, cosines, solutions of right triangles, and complex numbers. Prerequisites: MA 006, MA 106 or Placement.

## MA 211

### Statistics with Aviation Applications (3,0)

#### 3 Credits

Descriptive statistics; populations and samples; measures of central tendency and dispersion; elementary probability; binomial and normal distributions and their interrelationship; random variables; one and two sample hypothesis testing involving proportions and means for large and small samples; estimation and confidence intervals; Chi-square distribution; correlation coefficient; least squares line. Prerequisite: MA 111.

## MA 220

### Quantitative Methods II (3,0)

#### 3 Credits

An introductory calculus course with applications to business and economics. Differentiation and integration of algebraic, exponential and logarithmic functions. Applications of differentiation to maximizing and minimizing, curve sketching, marginal values. Prerequisite: MA-120 or equivalent.

## MA 222

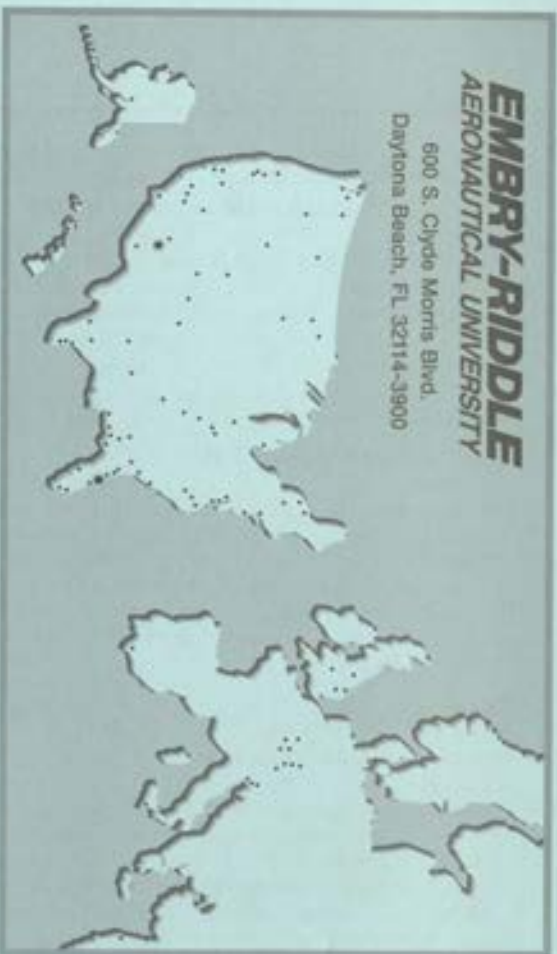
### Business Statistics (3,0)

#### 3 Credits

Measures of central tendency and dispersion; histograms; algebra of probability; sample spaces; dependent events; Bayes' Theorem with applications; binomial, Poisson, normal distributions and their interrelationships; sampling distributions; hypothesis testing; confidence intervals. Prerequisite: MA 112 or MA 140.

**EMBRY-RIDDLE**  
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