



Department of Applied Engineering and Technology  
*School of Applied Arts and Technology*  
College of Business & Technology (2015-16)

# Aviation B.S. Degree

Aerospace Technology (AT) Concentration

*2+2 Agreement: Somerset Community & Technical College*

## Aviation at EKU

EKU Aviation provides the aerospace industry with the safest, best trained, and most adaptable pilots and managers. The Bachelor of Science degree has concentrations in Professional Flight, Aerospace Management, or Aerospace Technology (AT). Besides a general aviation core, aviation students are required to take supporting courses in mathematics, statistics, physics, and business management. Graduates of the program are professionally prepared for all facets of the aerospace and aviation industry to include piloting, flight instruction, aviation management, and aerospace technology.

## Professional Flight

The professional flight concentration is the only Federal Aviation Administration (FAA) approved university flight program in Kentucky. Students receive flight certification as Private, Instrument, Commercial, Instructor, and Multi Engine pilot. Very few U.S. aviation programs offer 100 multiengine hours as part of the commercial pilot certificate training, coupled with an aviation bachelor's degree. This advantage makes EKU aviation the premier choice for those interested in flying careers with the airlines, air charter companies, or military aviation.

## Aerospace Technology (AT)

A leader in innovation, EKU Aviation is on the forefront of meeting market demands by offering a hard-to-find aviation degree-completion concentration. By adding upper division aerospace management and operations studies, the Bachelor's degree AT concentration is specifically designed to complete a 2-year community college degree with a heavy technical aviation course load. Examples of aviation technical degrees include Airframes & Power Plants (A&P), a 2-year helicopter and/or airplane proflight degree, or any 2-year career technical (CTE) degree partnered with a local flight school. Additionally, non-degreed airline pilots with the Airline Transport Pilot (ATP) certificate may complete their bachelor's degree. This concentration is designed to be offered online throughout Kentucky and the US or on-campus in Richmond.

## Aviation Careers

The U.S. Department of Labor projects employment of aircraft pilots to increase nine to ten percent through 2014. The "Age 65 Rule," (Dec. 2007), will reintroduce the beginning of another pilot shortage in the next few years as the initial wave of already very senior pilots begin to retire. In the long run, demand for air travel is expected to grow along with the population and the economy. Median annual earnings of commercial pilots are around \$50,000. Average entry level incomes for management are \$30,000-\$40,000. EKU aviation graduates have found positions with Delta, Chautauqua Airlines, Jet Blue, Continental, Kentucky Department of Aviation, U.S. Military, San Antonio International Airport, L-3, Kentucky State Police, Louisville Police Department, and through self-employment.

## Department Facilities, Faculty and Student Organizations

The Department is located in the Ralph W. Whalin Technology Complex which includes approximately 100,000 square feet of classroom and laboratory space plus a simulator facility. The facilities are located in the central portion of campus, close to the library, classroom buildings and dormitories. Flight training is conducted primarily at the Madison County Airport (Identifier 139). Faculty in the aviation program have real world industry experience ranging from military to airlines to corporate aviation and Part 135 Operations. The new Flight Operations Office houses the very latest in flight locating, scheduling and dispatch. Flight students receive flight training in accordance with FAR Part 141, saving time and money. Aviation students may also participate in Alpha Eta Rho - an international professional co-ed fraternity.

## For More Information

*EKU Aviation*

859-622-1014

[www.aviation.eku.edu](http://www.aviation.eku.edu)

email: [fly@eku.edu](mailto:fly@eku.edu)

Department of Applied Engineering and Technology

307 Whalin Complex, Room 245

Eastern Kentucky University

521 Lancaster Avenue

Richmond, KY 40475-3102



**Suggested Curriculum Guide for SCTC AA degree and ECU Aerospace Technology (AT)  
 Concentration – Aviation Maintenance Technology**

SCTC Aviation Maintenance Technology (AMT) - freshman through sophomore years

**Freshman (1<sup>st</sup> Semester) 16 hrs**

ATE 100 Aviation Math (1 hr)  
 ATE 102 Intro to Aircraft Maintenance I  
 ATE 104 Intro to Aircraft Maintenance II  
 ATE 106 Intro to Aircraft Maintenance III  
 ATE 108 Intro to Aircraft Maintenance IV  
 GE Math (GE 2 Mat 107 or higher at ECU)

**Freshman (2<sup>nd</sup> Semester) 15 hrs**

ATE 202 Aircraft Structures I  
 ATE 204 Aircraft Structures II  
 ATE 206 Aircraft Structures III  
 ATE 208 Aircraft Structures IV  
 GE Writing I (GE 1A ENG 101 at ECU)

**Freshman (3<sup>rd</sup> Semester)**

**Sophomore (1<sup>st</sup> Semester) 15 hrs**

ATE 222 Aircraft Systems I  
 ATE 224 Aircraft Systems II  
 ATE 226 Aircraft Systems III  
 ATE 228 Aircraft Systems IV  
 GE Science (GE 4B PHY 101 at ECU)

**Sophomore (2<sup>nd</sup> Semester) 15 hrs**

ATE 242 Aircraft Power Plants I  
 ATE 244 Aircraft Power Plants II  
 ATE 246 Aircraft Power Plants III  
 ATE 248 Aircraft Power Plants IV  
 GE Humanities (GE 3B Humanities at ECU)

**Sophomore (3<sup>rd</sup> Semester) 15 hrs**

ATE 252 Aircraft Power Plant Systems I  
 ATE 254 Aircraft Power Plant Systems II  
 ATE 256 Aircraft Power Plant Systems III  
 ATE 258 Aircraft Power Plant Systems IV  
 GE Social Interaction (GE 5B ECO 230 Principles of Economics I at ECU)  
 Total Somerset AAS Credits=76

Eastern Kentucky University (EKU) BS Aviation-Aviation Technology – junior\* through senior years

\*Junior Year (Bridge) courses can be taken at either institution

**Junior (1<sup>st</sup> Semester) 15 hrs Bridge**

GE 1C CMS 100 Oral Communication  
 Wellness  
 GE 6A Diversity  
 TEC 161 Computer Systems  
 GE 1B\* ENG 102

**Junior (2<sup>nd</sup> Semester) 15 hrs Bridge**

GE 3A Arts  
 GE 4A Natural or Lab Life Science  
 GE 6B Diversity  
 STA 215 Intro to Statistical Reasoning  
 (Prereq - All developmental requirements)  
 GE 5A Historical Perspective  
 Total Bridge Credits=30

**Junior (3<sup>rd</sup> Semester) 13hrs-EKU only**

BTS 300 Bus & Tech Seminar (0)  
 GEO 315 Meteorology or AVN 335 Weather Reporting/Analysis  
 AVN 150 Introduction to Aviation  
 MGT 301 Principles of Management  
 AVN 192 Private Pilot Ground (4)

**Senior (1<sup>st</sup> Semester) 15 hrs-EKU only**

AVN 315 Human Factors in Flight Safety  
 AVN 350 Air Transportation  
 AVN 340 Airport Management  
 AVN 360 Problems in Aviation  
 AVN 410 Air Traffic Control

**Senior (2<sup>nd</sup> Semester) 15 hrs-EKU only**

AVN 370 Techniques: Aviation Supervisors  
 AVN 390 AV Admin Decision Making  
 AVN 401 Airline Management  
 AVN 402 Corporate and Business Aviation  
 AVN 460 Aviation Legislation  
 BTS 400 Bus & Tech Seminar (0 credit)  
 AVN 467 Exit Exam (0 credit)

**Senior (3<sup>rd</sup> Semester) 0 hrs-EKU only**

**Total credits**  
 Somerset KCTCS=76 (47 credits are applicable to ECU BS Aviation-Aerospace Technology Option, with 41 LD and 6 UD)\*  
 Bridge (KCTCS or ECU)=30  
 ECU only=43 (7 LD and 36 UD)\*  
 47+30+43=120 semester hours

\*To receive a baccalaureate degree from ECU, a minimum of 30 semester hours must be completed at ECU and 42 credit hours must be in courses of 300 level or higher (Upper Division-UD).

**UNIVERSITY REQUIREMENTS**

**EKU Only Course Requirements:**

AVN 150, 192 (4), 315, 340, 350, 360, 370, 390, 401, 402, 410, 460, 467 (0); GEO 315 OR AVN 335; BTS 300 (0), 400 (0); MGT 301 (3).

Total ECU only credits ..... 43

Total ECU degree equivalent credits..... 120

**CREDIT SUMMARY**

SCTC Equivalent ECU credits..... 47

Bridge Credits taken at either institution ..... 30

EKU only credits ..... 43

Upper division Hours=36; Request a waiver of 6 upper division hours for equivalency credits awarded for AVN 325 and AVN 435.

Total equivalent degree credits ..... 120

**Note:** Because only 47 of Somerset's 76 Credits could be applied toward the ECU Aerospace Technology degree concentration, students will actually take more total credits to complete this degree.

**Note:** Students must take an Aviation exit examination, AVN 467, before graduation. Also, one 3-credit course from the Gen Ed requirements must be a Writing Intensive course with a suffix of "W." Proflight students may elect to replace the flight instructor sequence with 5 AVN elective credits and still graduate. However, those interested in receiving the new "1000-hour power" R-ATP certificate must take AVN 421 from that sequence, at least one flight lab, i.e., AVN 416A, and another 3 credit AVN elective course. Additionally, AVN 470 must be taken by proflight students seeking the new 1000-hour Restricted ATP certification.