

# Kansas State Polytechnic: College of Technology and Aviation

## Aviation Maintenance Management

### Overview

This Bachelor of Science degree option gives students background for leadership, manufacturing, sustainment, and business roles in the aerospace industry. Courses enhance verbal and written personnel and technical communication skills, and develop math and computer skills necessary to support high technology in-service engineering support and operational environments. The foundation of the program is the internationally recognized Federal Aviation Administration Part 147 curriculum. This Aircraft Maintenance Technician School (AMTS) develops core technical skills necessary to support manned and unmanned aircraft and propulsion systems and leading to Airframe and Powerplant ratings within the Aircraft Maintenance Technician Certificate. There are numerous opportunities for advanced education and training, including area of concentration selectives that allow the student to create a flexible degree program that maps courses to the development of skills that align to desired career goals. These courses include specializations in aircraft sustainment systems, technical management, manufacturing, aircraft electronics, unmanned aircraft systems, business, logistics and supply chain, and Quality and Safety Management. This program provides excellent preparation for employment in these and many other diverse career fields within aviation and other high technology industries.

### Points of pride

Graduates have obtained positions with companies such as Textron Aviation, General Atomics Aeronautical Systems, Boeing, General Electric, Duncan Aviation Services, CAMP Systems International, Spirit Aerospace, Yingling Aviation and many more.

### Professional options

#### Careers

This program is designed for individuals who want to make a positive impact on the safe and cost effective operation of complex and advanced aircraft. Graduates enter positions at companies that have high potential for continued career growth. Entry-level positions soon turn into supervisory or advanced technical support roles within wide variety of aircraft operations to include fixed-wing and rotary-wing commercial and corporate flight

### Required coursework

#### Aviation Maintenance Management, bachelor's degree option (124 credit hours)

##### Freshman

###### Fall semester (14 credit hours)

2	AVM 101	Introduction to Aircraft Materials and Tooling Standards
3	ENGL 100	Expository Writing I
3	MATH 100	College Algebra
3	MET 111	Technical Graphics
3	MET 121	Manufacturing Methods

###### Spring semester (14 credit hours)

2	AVM 102	Aviation Regulations, Compliance and Operations
3	AVM 203	Aircraft Environmental and Fire Protection Systems
3	AVM 205	Aircraft Landing Gear and Fluid Power Systems
3	AVT 100	Introduction to Aviation
3	COMM 106	Public Speaking I

##### Sophomore

###### Fall semester (16 credit hours)

3	AVM 201	Aircraft Metallic Primary Structures
3	AVM 214	Introduction to Aircraft Propulsion, Theory, Design and Systems
4	ECET 100	Basic Electronics
3	ENGL 200	Expository Writing II
3	MATH 150	Plane Trigonometry

###### Spring semester (16 credit hours)

3	AVM 207	Aircraft Electrical Systems
3	AVM 216	Aircraft Propulsion Drive Systems
3	AVM 303	Introduction to Aircraft Composite Structures
3	ENGL 302	Technical Writing
4	PHYS 113	General Physics I

### Junior

#### Fall semester (18 credit hours)

3	AVM 301	Advanced Reciprocating Powerplant Technology
3	AVM 305	Introduction to Aircraft Avionics and Instrument Systems
3	MATH 205	General Calculus and Linear Algebra
3	STAT 325	Introduction to Statistics
3	Area of Concentration Elective	
3	Aviation Safety Elective	

#### Spring semester (15 credit hours)

3	AVM 304	Aircraft Fuel Management and Metering Systems
3	AVM 306	Rotary and Fixed Wing Aircraft Design and Assembly
3	BUS 315	Supervisory Management
3	PHILO 390	Business Ethics
3	Area of Concentration Elective	

### Senior

#### Fall semester (14 credit hours)

3	AVM 402	Advanced Gas Turbine Powerplant Technology
2	AVM 403	Advanced Aircraft Avionics and Instrument Systems
3	AVT 340	Human Factors in Aviation
3	AVT 410	Aviation Maintenance Management
OR		
3	AVT 446	Corporate and Business Aviation Management
3	Area of Concentration Elective	

#### Spring semester (17 credit hours)

3	AVM 401	Aircraft Airworthiness, Conformity, and Quality Assurance
2	AVT 405	Introduction to Non-Destructive Testing
3	AVT 445	Aviation Law
3	Area of Concentration Elective*	
3	Area of Concentration Elective*	

#### Culminating Experience:

Choose one of the following

3	AVT 497	Senior Project
3	COT 495	Industrial Internship

\*Marked electives must be upper-level courses, 300 and above.

### Area of Concentration Elective Courses

Choose 15 credit hours from the following list:

4	AVT 242	Aviation Meteorology
3	AVT 250	Safety and Security of Airport Ground Operations
3	**AVT 315	Advanced Avionics
1	AVT 316	AET and FCC Training
3	AVT 317	Composites I
3	AVT 327	Avionics Repair
4	AVT 330	Avionics Troubleshooting
3	AVT 340	Human Factors in Aviation
3	AVT 386	Aerodynamics
4	AVT 400	Composites II
3	AVT 417	Composites III
3	AVT 420	Aviation Accident Investigation
3	AVT 429	Avionics Maintenance
4	AVT 430	Advanced Avionics Installation
3	AVT 450	Aviation Safety Management
3	AVT 451	System Safety
3	BUS 251	Financial Accounting
3	BUS 252	Managerial Accounting
3	***COT 721	Reliability Centered Maintenance of Plant Equipment
3	**FINAN 450	Principles of Finance
3	MANGT 420	Management Concepts
3	MANGT 421	Introduction to Operations Management
3	MANGT 530	Industrial and Labor Relations
3	MET 117	Mechanical Detailing
3	MET 121	Manufacturing Methods
2	MET 125	CNC Machining Processes
3	MET 230	Automated Manufacturing Systems
3	**MET 231	Physical Materials and Metallurgy
3	MET 252	Fluid Power Technology
3	**MKTG 400	Introduction to Marketing
3	MKTG 542	Fundamentals of Professional Selling
4	PPIL 111	Private Pilot
3	PPIL 112	Professional Instrument Pilot
1	PPIL 113	Private Pilot Flight Lab
1	PPIL 114	Professional Instrument Pilot Flight Lab I

Other programming electives may be used if approved by the BATN-AM program coordinator. Selection of some Areas of Concentration may result in an increase in the number of course credit hours taken above the minimum degree option graduation credit hour requirements.

**\*\* Courses require additional completion of course pre-requisites or co-requisites.**

**\*\*\*Courses at 600+ level will require the approval of the graduate program director.**

### Aviation Safety Elective Courses

Choose 3 credit hours from the following list:

3	AVT 250	Safety and Security of Airport Ground Operations
3	AVT 420	Aviation Accident Investigation
3	AVT 450	Aviation Safety Management
3	AVT 451	System Safety

### For more information about the aviation maintenance management program, contact:

Kansas State Polytechnic  
Office of Admissions  
2310 Centennial Road  
Salina, KS 67401-8196  
785-826-2640  
polytechnic@k-state.edu

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Post-Graduation Statistics  
k-state.edu/postgrad-stats  
ksdegrestats.org