

Attachment 5

Academic Affairs

Discussion Agenda Supplemental Information – New Degree Proposal

Faculty Senate Review – June 11, 2019 Meeting

<https://kstate.curriculog.com/agenda:729/form>

Technology and Aviation (Polytechnic)

Aviation Maintenance (A.A.S.)

Contact person(s) for this proposal: Andrew Smith, 785-826-2682, atsmith@ksu.edu

Program Name: Associate of Applied Science in Aviation Maintenance

Rationale: The aviation industry is experiencing a human resource shortage of qualified aviation maintenance personnel; this need will continue into the foreseeable future. This shortage is affecting related organizations in their ability to provide services to growing customer (aircraft operators) needs. Upon completing the Federal Aviation Administration certification requirements, this proposal will allow our students to earn an associate’s degree in two years and be eligible for work force employment earlier.

Kansas has a long history of fulfilling the needs of the aviation industry. As the one of two Aviation Maintenance Technician Schools (FAA Part 147) in Kansas that offers this training, KSUPC has done its part in producing quality aviation maintenance graduates to serve this stable, yet growing industry. As the aviation industry is undergoing shortages that are forecasted to worsen before improving, KSUPC has an opportunity to move quickly and aid in providing skilled aviation personnel that will be ready for the workforce with a shorter degree plan.

Impact (i.e. if this impacts another unit) – Statement should include the date when the head of a unit was contacted, and the response or lack of: No impact to other units.

	<p>Aviation Maintenance, Associate of Applied Science 70 credit hours</p> <p>Core Requirements (51 credit hours)</p> <p>AVM 101 Introduction to Aircraft Materials and Tooling Standards..... 3</p> <p>AVM 102 Aviation Regulations, Compliance and Operations.... 2</p> <p>AVM 111 Basic Aircraft Electricity 4</p> <p>AVM 201 Aircraft Metallic Primary Structures..... 3</p> <p>AVM 203 Aircraft Environmental and Fire Protection Systems 3</p> <p>AVM 205 Aircraft Landing Gear and Fluid Power Systems 3</p> <p>AVM 207 Aircraft Electrical Systems..... 3</p> <p>AVM 214 Introduction to Aircraft Propulsion, Theory, Design and Systems..... 3</p> <p>AVM 216 Aircraft Propulsion Drive Systems 3</p> <p>AVM 301 Advanced Reciprocating Powerplant Technology..... 3</p> <p>AVM 303 Introduction to Aircraft Composite Structures 3</p> <p>AVM 304 Aircraft Fuel Management and Metering Systems 3</p> <p>AVM 305 Introduction to Aircraft Avionics and Instrument Systems 3</p> <p>AVM 306 Rotary and Fixed Wing Aircraft Design and Assembly 3</p>
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	AVM 322	Powerplant Operations and Troubleshooting	3
	AVM 370	Advanced Aircraft Avionics and Instrument Systems	3
	AVM 402	Advanced Gas Turbine Powerplant Technology	3
	Other Requirements (16 credit hours)		
	COMM 106	Public Speaking.....	3
	ENGL 100	Expository Writing I	3
	MATH 100	College Algebra	3
	MET 111	Technical Graphics	3
	PHYS 113	General Physics I	4
	Elective (3 credit hours)		
		Humanities/Social Science/Business Elective.....	3

KBOR Program Approval

I. General Information

A. Institution Kansas State University

B. Program Identification

Degree Level: Associate of Applied Science
 Program Title: Aviation Maintenance
 Degree to be Offered: Associate of Applied Science in Aviation Maintenance
 Responsible Department or Unit: College of Technology and Aviation/School of Integrated Studies
 CIP Code: 47.0607
 Modality: Face-to-Face
 Proposed Implementation Date: Spring 2020

Total Number of Semester Credit Hours for the Degree: 70

II. Justification

The aviation industry is experiencing a human resource shortage of qualified aviation maintenance personnel; this need will continue into the foreseeable future. This shortage is affecting related organizations in their ability to provide services to growing customer (aircraft operators) needs. Upon completing the Federal Aviation Administration certification requirements, this proposal will allow our students to earn an associate’s degree in two years and be eligible for work force employment earlier.

Kansas has a long history of fulfilling the needs of the aviation industry. As the one of two Aviation Maintenance Technician Schools (FAA Part 147) in Kansas that offers this training, KSUPC has done its part in producing quality aviation maintenance graduates to serve this stable, yet growing industry. As the aviation industry is undergoing shortages that are forecasted to worsen before improving, KSUPC has an opportunity to move quickly and aid in providing skilled aviation personnel that will be ready for the workforce with a shorter degree plan.

III. Program Demand: Select one or both of the following to address student demand:

A. Survey of Student Interest

Number of surveys administered: _____
 Number of completed surveys returned: _____
 Percentage of students interested in program: ... _____

Include a brief statement that provides additional information to explain the survey.

B. Market Analysis

[Please limit to approximately **500** words; place your Market Analysis here.]

Boeing Technician Outlook: 2018 – 2037 www.boeing.com

“As new generation airplanes become more prominent in the global fleet, advances in airplane technology will drive an increased need for technicians skilled in avionics, composites, and digital troubleshooting... The need for maintenance personnel is largest in the Asia Pacific region, which will require 257,000 new technicians. Airlines in North America will require 189,000, Europe 132,000, the Middle East 66,000, Latin America 55,000, Africa 28,000, and Russia / Central Asia 27,000.”

Aviation Technician Education Council supports the Coalition in Support of Workforce Grant Program to advance aviation maintenance education; ATEC (March 2019 annual conference www.atec-amt.org) shared the need for maintenance technicians is high, and looming workforce retirements coupled with nationwide low school enrolments are holding up industry progress and advancements. Textron Aviation Workforce Development has indicated hiring challenges for aviation maintenance professionals now.

IV. Projected Enrollment for the Initial Three Years of the Program

Year	Headcount Per Year		Sem Credit Hrs Per Year	
	Full- Time	Part- Time	Full- Time	Part- Time
Implementation	12	0	15	0
Year 2	15	0	20	0
Year 3	22	0	25	0

V. Employment

The demand by industry partners for our aviation maintenance graduates has never been higher than what it is now; there is a big need for replacement employees throughout aviation maintenance and aircraft servicing areas and this industry is facing a looming retirement of large numbers of people. also, our current student enrollment is far from our capacity limit, and the same for many more aviation maintenance programs across our nation. I have been in this field for 37 years, and teaching in it for over 26 years - Andrew Smith

VI. Admission and Curriculum

A. Admission Criteria

[Please limit to approximately **150** words; place your Admission Criteria here.]

University Admission Requirements:

Complete the [precollege curriculum](#) with at least a 2.0 GPA (2.5 for [non-residents](#)) **AND** achieve one of the following:

- A 21 or higher composite score on the ACT assessment **OR**
- A 1060 or higher on the SAT ERW+M if taken after March 2016 **OR**
- A 980 or higher on the SAT CR + M if taken before March 2016 **OR**

- Rank in the top third of your graduating class
- AND, if applicable, achieve a 2.0 GPA or higher on all college credit taken in high school.

B. Curriculum

Year 1: Fall

SCH = Semester Credit Hours

Course #	Course Name	SCH....
AVM 101	Introduction to Aircraft Materials and Tooling Standards	3
AVM 102	Aviation Regulations, Compliance and Operations	2
AVM 111	Basic Aircraft Electricity	4
AVM 214	Introduction to Aircraft Propulsion Theory, Design and Systems	3
MET 111	Technical Graphics	3
	Humanities/Social Science elective	3

Year 1: Spring

Course #	Course Name	SCH....
AVM 201	Aircraft Metallic Primary Structures	3
AVM 203	Aircraft Environmental and Fire Protection Systems	3
AVM 205	Aircraft Landing Gear and Fluid Power Systems	3
AVM 207	Aircraft Electrical Systems	3
AVM 305	Introduction to Aircraft Avionics and Instrument Systems	3
ENGL 100	Expository Writing I	3

Year 2: Fall

Course #	Course Name	SCH....
AVM 216	Aircraft Propulsion Drive Systems	3
AVM 303	Introduction to Aircraft Composite Structures	3
AVM 306	Rotary and Fixed Wing Aircraft Design and Assembly	3
AVM 370	Advanced Aircraft Avionics and Instrument Systems	3
COMM 106	Public Speaking I	3
MATH 100	College Algebra	3

Year 2: Spring

Course #	Course Name	SCH....
AVM 301	Advanced Reciprocating Powerplant Technology	3
AVM 304	Aircraft Fuel Management and Metering Systems	3
AVM 322	Powerplant Operations and Troubleshooting	3
AVM 402	Advanced Gas Turbine Powerplant Technology	3
PHYS 113	General Physics I	4

Total Number of Semester Credit Hours 70

VII. Core Faculty

Note: * Next to Faculty Name Denotes Director of the Program, if applicable
 FTE: 1.0 FTE = Full-Time Equivalency Devoted to Program

Faculty Name	Rank	Highest Degree	Tenure Track Y/N	Academic Area of Specialization	FTE to Proposed Program
Andrew Smith	Professor	MS	Y	Aviation Maintenance, Flight, Airport Management	1.0
Steven Locklear	Instructor	MS	N	Aviation Maintenance	1.0
Monty Root	Lab Technician	BS	N	Aviation Maintenance	1.0

Number of graduate assistants assigned to this program **0**

VIII. Expenditure and Funding Sources (List amounts in dollars. Provide explanations as necessary.)

A. EXPENDITURES	First FY	Second FY	Third FY
Personnel – Reassigned or Existing Positions			
Faculty			
Administrators (other than instruction time)			
Graduate Assistants			
Support Staff for Administration (e.g., secretarial)			
Fringe Benefits (total for all groups)			
Other Personnel Costs			
Total Existing Personnel Costs – Reassigned or Existing	0	0	0
Personnel – – New Positions			
Faculty			
Administrators (other than instruction time)			
Graduate Assistants			
Support Staff for Administration (e.g., secretarial)			
Fringe Benefits (total for all groups)			
Other Personnel Costs			
Total Existing Personnel Costs – New Positions	0	0	0
Start-up Costs - - One-Time Expenses			
Library/learning resources			
Equipment/Technology			
Physical Facilities: Construction or Renovation			
Other			
Total Start-up Costs	0	0	0
Operating Costs – Recurring Expenses			

Supplies/Expenses			
Library/learning resources			
Equipment/Technology			
Travel			
Other			
Total Operating Costs	0	0	0
GRAND TOTAL COSTS	0	0	0

B. FUNDING SOURCES <i>(projected as appropriate)</i>	Current	First FY (New)	Second FY (New)	Third FY (New)
Tuition / State Funds				
Student Fees				
Other Sources				
GRAND TOTAL FUNDING	0	0	0	0
C. Projected Surplus/Deficit (+/-) (Grand Total Funding <i>minus</i> Grand Total Costs)		0	0	0

IX. Expenditures and Funding Sources Explanations

A. Expenditures

Personnel – Reassigned or Existing Positions

Personnel – – New Positions

Start-up Costs – One-Time Expenses

Operating Costs – Recurring Expenses

B. Revenue: Funding Sources

C. Projected Surplus/Deficit

X. References