

## Curriculum Committee



### New Course Proposal

<b>School or Division</b>	School of Business and Technology
<b>Program or Certificate</b>	Aviation Airframe Mechanics (PSAV) Program Number – T640300 CIP Number - 0647060703
<b>Proposed by (faculty only)</b>	Professor Leroy Bugger
<b>Presenter (faculty only)</b>	Professor Leroy Bugger
Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or the proposal will be returned to the School or Division and must be submitted for a later date.	
<b>Submission date</b>	10/12/2017
<b>Course prefix, number, and title</b>	AMT 0703 AVIATION MAINTENANCE TECHNOLOGY GENERAL III

### Section I, New Course Information (must complete all items)

<b>List course prerequisite(s) and minimum grade(s) (must include minimum grade if higher than a "D").</b>	Admission into the Aviation Airframe Mechanics (PSAV) program and successful completion of AVM 0702 with a minimum grade of a "C." Must have a minimum of "C" in this course to pass.
<b>Provide justification for the proposed prerequisite(s).</b>	This is a limited access and limited enrollment program.
<b>Will students be taking any of the prerequisites listed for this course in different parts of the same term (ex. Term A and Term B)?</b>	No
<b>List course co-requisites.</b>	NA
<b>Provide justification for the proposed co-requisite(s).</b>	NA
<b>Is any co-requisite for this course listed as a co-requisite on its paired course? (Ex. CHM 2032 is a co-requisite for CHM 2032L, and CHM 2032L is a co-requisite for CHM 2032)</b>	No  NA
<b>Course credits or clock hours</b>	120 clock hours
<b>Contact hours (faculty load)</b>	120 clock hours
<b>Select grade mode</b>	Standard Grading (A, B, C, D, F)

<b>Credit type</b>	Vocational Credit
<b>Course description</b> (provide below)	
Classroom and laboratory study of basic DC and AC electricity including electron theory, Ohm's law, Kirchhoff's laws, and electrical power. Also covered are series, parallel, and combination circuits, inductance, capacitance and digital concepts.	

<b>General topic outline</b> (type in outline below)
<ul style="list-style-type: none"> <li>• Basic electricity and DC electrical circuits</li> <li>• Aircraft battery service and inspection</li> <li>• Hand and power tools</li> <li>• AC electrical circuits and solid-state circuits</li> </ul>

**Learning Outcomes:** For information purposes only.

<p><b>IV. Course Competencies, Learning Outcomes and Objectives</b></p> <p><b>A. General Education Competencies and Course Outcomes</b></p> <p>1. Integral <i>General Education Competency or competencies</i>: Think</p> <ul style="list-style-type: none"> <li>• Discuss the principles and use of magnetism as it applies to electromagnetic and electromechanical components within direct and alternating current circuits.</li> </ul> <p><b>B. Other Course Objectives/Standards</b></p> <ul style="list-style-type: none"> <li>• The analysis and solving of direct current electrical circuits utilizing circuit parameters given.</li> <li>• Identify electrical and electronic circuit symbols and interpret basic aircraft electrical schematics and wiring diagrams.</li> <li>• Demonstrate the proper testing techniques by troubleshooting various electrical circuits utilizing the multi-meter.</li> <li>• To analyze the effects on the circuit characteristics of an alternating circuit containing inductors and capacitors that are found in RLC series and parallel circuits.</li> <li>• Discuss, construct, and analyze various semiconductor circuits utilizing transformers, diodes, junction transistors, and logic gates.</li> </ul>
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<ul style="list-style-type: none"> <li>• Correctly interpret and analyze various aircraft electrical system wiring schematics.</li> <li>• Discuss typical direct current power distribution systems and component interaction for various General Aviation type aircraft.</li> <li>• Inspect and service utilizing proper manufacturer procedures for both Lead-Acid and Nickel-Cadmium batteries found in aircraft.</li> </ul>

<p><b>Copy and Paste the SCNS Course Profile Description below (<a href="http://scns.fldoe.org/scns/public/pb_index.jsp">http://scns.fldoe.org/scns/public/pb_index.jsp</a>).</b></p>
<p>THIS COURSE IS DESIGNED TO INTRODUCE BASIC ELECTRICITY AND DC ELECTRICAL CIRCUITS; AIRCRAFT BATTERY SERVICE AND INSPECTION; AC ELECTRICAL CIRCUITS AND SOLID-STATE CIRCUITS.</p>

ICS code for this course	POSTSECONDARY ADULT VOCATIONAL (PSAV) - 1.26.02 - INDUSTRIAL
Should any major restriction(s) be listed on this course? If so, select "yes" and list the appropriate major restriction code(s) or select "no".	Yes PSAV
Is the course an "International or Diversity Focus" course?	No, not International or Diversity Focus
Is the course a General Education course?	No
Is the course a Writing Intensive course?	No
Is the course repeatable*?	No

(A repeatable course may be taken more than one time for additional credits. For example, MUT 2641, a 3 credit hour course can be repeated 1 time and a student can earn a maximum of 6 credits). *Not the same as Multiple Attempts or Grade Forgiveness	
<b>Do you expect to offer this course three times or less (experimental)?</b>	No

<b>Impact of Course Proposal</b>	
<b>Will this new course proposal impact other courses, programs, departments, or budgets?</b>	No
<b>If the answer to the question above is "yes", list the impact on other courses, programs, or budgets?</b>	
<b>Have you discussed this proposal with anyone (from other departments, programs, or institutions) regarding the impact? Were any agreements made? Provide detail information below.</b>	
NA	

**Section II, Justification for proposal**

<b>Provide justification (below) for this proposed curriculum action.</b>
<p>This course is part of a program being proposed to provide needed workforce credentialing to fill the gap and shortage of qualified aviation technicians, which is forecast to become more acute as a greater number of technicians retire than enter the field. In fact, according to a study commissioned by Boeing, commercial aviation will require 238,000 new technicians worldwide over the next 20 years, with North America accounting for 113,000 new technicians, almost 50% of total demand. According to an analysis prepared by EMSI, the job market in SWFL for A&amp;P technicians is fairly strong, averaging 20 monthly postings and 47 monthly hires from April of 2013 through April of 2015. A&amp;P technicians enjoy high average hourly earnings of greater than \$24/hr. The total economic impact of the program 10 years after implantation is forecast to be \$118.2 million and the average lifetime earnings for individual technicians are forecast to be improved (over what they would otherwise have earned) of roughly \$525,000 in today's net present value dollars (for Airframe and Powerplant mechanics combined), so the economic development implications are quite significant.</p>

Graduates of similar programs are actively recruited not only by the aviation industry, but also by industries as diverse as elevator installation/repair and amusement park ride repair as the skills sets and particular attention to detail engendered by the A&P curriculum are essential in those industries, as well.

**Section III, Important Dates and Endorsements Required**

List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).

Leroy Bugger (Department Chair), Dr. Tim Lucas, Jennifer Patterson, Andrew Blitz

**NOTE:** Course and Program changes must be submitted by the dates listed on the published Curriculum Committee Calendar. Exceptions to the published submission deadlines must receive prior approval from the Provost's Office.

<b>Term in which approved action will take place</b>	Fall 2018
<b>Provide an explanation below for the requested exception the submission deadline.</b>	

<b>Any exceptions to the term start date requires the signatures of the Academic Dean or Associate Vice President and the Provost prior to submission.</b>		
<b>Dean or Associate Vice President</b>	<b>Signature</b>	<b>Date</b>
Type name here		
<b>Provost</b>	<b>Signature</b>	<b>Date</b>
Dr. Jeff Stewart		

Required Endorsements	Type in Name	Select Date
<b>Department Chair or Program Coordinator/Director</b>	Leroy Bugger	10/13/2017
<b>Academic Dean or Associate Vice President</b>	Dr. Tom Rath	10/13/2017

Select Curriculum Committee Meeting Date	11/03/17
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All Curriculum proposals require approval of the Curriculum Committee and the Provost. Final approval or denial of a proposal is reflected on the completed and signed proposal.

Approve       Do not approve      (ATM 0703)

May L. Myers

Curriculum Committee Chair Signature

11/8/17

Date

Approve       Do not approve

Jeff Steward

Provost Signature

11/13/17

Date