Alabama Community College System

Proposal for a New Program (Associate/Certificate)

College: Calhoun Community College

X **Associate of Applied Science**

☐ **Associate of Applied Technology**

Certificate

1. Date of Proposal Submission: 10/01/2023

2. Full Program Name: Aviation Airframe Technology

3. Marketing Name: Aviation Technology

4. CIP Code: 47.0607

5. Learning Outcomes and Program Review:

    Succinctly list four (4) but not more than seven (7) of the most prominent student learning outcomes of the program.

    a. *Acquire technical knowledge and skills to repair, service, and maintain all aircraft components with the exception of the powerplant.*
    b. *A student will understand and apply the regulatory framework, including the general subject matter of the parts of 14 CFR relevant to aircraft maintenance and mechanics.*
    c. *A student will be able to identify aircraft hardware, performance of non-destructive testing, fabrication, and inspection of flexible fluid lines, identification of fuels, use of cleaning materials, and corrosion control programs.*
    d. *A student will master using aircraft sheet metal tools, sheet metal equipment, and verbal instructions, demonstrating the proper use of each tool and piece of equipment while completing assigned tasks relating to certification.*
    e. A student shall comprehend the operation of various hydraulic and pneumatic

components and systems, landing gear systems, and various position and warning systems.

6. Employment Outcomes and Program Demand-

   a. Indicate the primary industry where graduates would seek employment using the North American Industry Classification System (NAICS): www.naics.com/search/.

      NAICS Code: 488190

   b. Select at least one (1) and up to three (3) Standard Occupational Codes (SOCs) where graduates of the new program would seek employment: www.bls.gov/soc/2018/major_groups.html

      SOC Code 1: *49-3011* Required)
      SOC Code 2: _____
      SOC Code 3: _____

   c. Please explain whether further education/training is required for graduates of the proposed program to gain entry-level employment in the occupations selected.

      FAA certification is normally required to begin a career as an aviation maintenance technician.

   d. Please describe how you will determine whether graduates are successful in obtaining relevant employment or pursuing further study.
      To determine whether graduates are successful in obtaining relevant employment or pursuing further study, the college will employ a comprehensive and data-driven approach. This process involves several key steps:

      Post-Graduation Surveys: The college will administer surveys to all graduates shortly after graduation to gather important data on their employment status or further study plans. The survey will inquire about the graduates' current employment, job title, industry, and salary (if applicable). For those pursuing further study, the college will ask about the specific program, institution, and their motivation for continuing their education.

      Alumni Engagement: The college will maintain strong connections with its alumni, encouraging them to stay in touch and share their post-graduation experiences. Through regular interactions and networking events, the college will gain valuable insights into the career trajectories of their former students.

      Longitudinal Studies: To track the long-term success of graduates, the college will conduct longitudinal studies, following the careers and educational pursuits of alumni over several years or even decades. These studies will provide a more

comprehensive understanding of how well the education received at the college has prepared graduates for their professional lives.

Employment Reports: The college will compile and publish annual employment reports that provide an overview of graduates' job placement rates, industries, and employers. These reports will be accessible to current students, prospective students, and potential employers, showcasing the college's commitment to transparency and accountability.

Partnerships with Employers and Institutions: Building strong relationships with employers and further study institutions will enable the college to receive feedback on the performance of its graduates. Employers may provide insights into the graduates' skills and preparedness for the job market, while further study institutions can offer perspectives on the college's academic rigor and how well it aligns with their programs.

Career Services and Counseling: The college's career services team will work closely with graduates to offer support in their job search or application process for further study. Career advisors will provide guidance on resume building, interview preparation, and networking strategies to increase graduates' chances of securing relevant employment or admission to reputable programs.

Alumni Success Stories: The college will actively collect and share success stories of its graduates who have excelled in their chosen fields or further studies. These stories will serve as inspiring examples for current students and demonstrate the real-world impact of the college's education.

Holistic Measurement of Success: The college will adopt a holistic approach to measure success beyond employment or further study. It will also consider other indicators, such as alumni satisfaction with their college experience, their contributions to society, and their personal growth.

By implementing this comprehensive approach, the college will have a clear and accurate picture of the success of its graduates in obtaining relevant employment or pursuing further study. The data collected will help the institution continuously improve its programs and support services to better prepare students for successful and fulfilling futures.

e. Briefly describe how the program fulfills a specific industry or employment need for the State of Alabama. Please refer to the State's "In-Demand Occupations List" (https://ache.edu/Instruction.aspx) or include local and statewide occupational projections, along with data sources as appropriate. **An Emsi data report is required for this program.** Report Attached.

An aviation maintenance program located at Calhoun Community College will help the State of Alabama fulfill specific industry and employment needs by addressing the demands of the aviation sector within the state. Alabama has a growing aerospace and aviation industry, with a significant presence of aviation-related companies, including

Boeing, Airbus, and various suppliers. Alabama is home to numerous aerospace and aviation companies, including the Yulista manufacturing facility in Huntsville. ==Additionally, "Aircraft Mechanics & Service Technicians" is listed on the 2023 statewide list of in-demand occupations for Alabama.== These companies require a steady supply of qualified AMTs to maintain their aircraft and operations. An aviation maintenance program can serve as a talent pipeline for these companies, helping them meet their staffing needs.

Alabama's aviation industry requires a skilled and certified workforce to maintain and repair aircraft. The aviation maintenance program will train individuals to become certified aviation maintenance technicians (AMTs), equipping them with the knowledge and skills needed for aircraft maintenance, inspection, and repair. The Federal Aviation Administration (FAA) sets strict regulations for aviation maintenance. A well-structured program ensures that graduates are knowledgeable about and compliant with FAA standards, ensuring the safety and reliability of aircraft in the state.

To attract new aviation businesses to the state, Alabama needs a well-trained and certified aviation maintenance workforce. Having a robust aviation maintenance program at Calhoun Community College demonstrates the state's commitment to supporting the industry, making it more attractive for aviation companies to establish or expand their operations in Alabama. A thriving aviation maintenance sector contributes to the state's economic growth. By providing specialized training, the program enables individuals to secure well-paying jobs in the aviation industry, which, in turn, boosts the state's economy through increased income, consumer spending, and tax revenue.

Finally, establishing partnerships between Calhoun Community College's aviation maintenance program and local aviation companies can provide students with practical experience, internships, and potential job opportunities upon graduation. These partnerships strengthen the connection between education and employment in the aviation sector. This program will be a vital link between education and the needs of the aviation industry within the state. It helps develop a skilled workforce, promotes safety and compliance, attracts and retains aviation businesses, stimulates economic growth, and contributes to the overall well-being of the state's aviation sector.

f. Briefly describe evidence of student demand for the program, including enrollments in related coursework at your institution if applicable.

Evidence of student demand for a program has been observed through various indicators, and enrollments in related coursework at Calhoun Community College.

Enrollment Numbers: The college has analyzed enrollment numbers in specific courses related to the program of interest. There are consistently high enrollments in these courses, it indicates a strong interest among students in the subject matter and potential demand for a formal program in that area.

Waitlists and Overcapacity: Certain courses related to the program (Technical classes) have waitlists or consistently reach maximum capacity, it suggests that there is higher demand than the college can currently accommodate. This indicates a need to expand offerings or introduce a dedicated program.

Student Surveys and Feedback: Surveys and feedback from current students provided valuable insights into their interests and desires for future programs. Questions regarding the appeal of a potential program, areas of interest, and the likelihood of enrolling in such a program have yielded valuable data.

External Factors: The college has examined external factors such as industry trends, job market demands, and social issues and gauged the relevance and potential demand for a program that aligns with current and future needs.

g. If a survey of student interest was conducted, briefly describe the survey instrument, number and percentage of respondents, and summary of results.
Calhoun recently surveyed 74 prospective students asking questions about their interest in this program, their perceived need for the program, and if they would recommend the program to others. Forty-four of those students said they would like to be enrolled in the Aviation Maintenance Technology program. Fifty-four students rated the perceived need for the program as very high, high, or moderate. Fifty-one students stated either they would enroll or recommend the program to someone else.

7. Curriculum and Prerequisites-

a. Program Completion Requirements (Enter a credit hour value for all applicable components, and write NA if not applicable)

Credit hours required in program courses	*66*
Credit hours in general education or core curriculum	*16*
Credit hours required in support courses	N/A
Credit hours in required or free electives	N/A
Credit hours in required research	N/A
Total Credit Hours Required for Completion	66

b. Please indicate the maximum number of credits that can be transferred in from another institution and applied to the program: *45*

c. Please describe any work-based learning (WBL) activities that are required or recommended for program completion (including internships, practical/clinical experience, applied research, or other immersive experiences designed to prepare graduates for employment in the field). Definitions and examples of different types of WBL are available at www.alapprentice.org.

The college in association with the Alabama Office of Apprenticeship will implement and utilize the following in this program.

Internships: The program will require students to complete a certain number of internship hours in the field of study. These internships provide students with valuable industry experience, networking opportunities, and the chance to apply classroom knowledge to real-world projects.

Practicums: Some courses within the program may have integrated practicums, allowing students to gain hands-on experience while studying specific topics. Practicums are supervised by faculty members and provide a structured and supportive environment for students to apply their skills.

Industry Projects: Throughout the program, students will engage in industry-based projects, collaborating with local businesses or organizations to solve real challenges. This approach allows students to demonstrate their abilities, build their portfolios, and establish professional connections.

Simulations and Case Studies: The program will incorporate simulations and case studies to simulate real-world scenarios. Students work individually or in groups to analyze complex situations, make decisions, and present solutions based on actual industry challenges.

Professional Development Workshops: The college will organize workshops on resume building, interview skills, and networking to prepare students for successful WBL experiences.

Service-Learning Projects: Some courses may involve service-learning projects that combine community service with academic learning. Students engage with local organizations to address societal needs while developing critical skills relevant to their program of study.

Industry Visits and Guest Speakers: The college will arrange visits to various industries and invite guest speakers from different fields to provide insights into industry practices, career opportunities, and the relevance of the program in the real world.

d. Does the program include any options/concentrations? If so, please describe the purpose and rationale for the options, and list the courses for each in the table below. *NA*

e. Please complete the table below indicating all coursework for the proposed program, specifying any new courses developed for the program, along with the courses associated with each option as applicable. Include the course number, course title, and number of credits. Coursework listed should total the number of hours required to complete the program.

Course Number and Title	Number of Credit Hours	*If New Course
ENG 101 English Composition	3	
Humanities/Fine Arts Elective	3	
MTH 103 Technical Mathematics	3	
History, Social, or Behavior Sciences Elective	3	
Science Elective	4	
AMT 101 Basic Electricity	5	
AMT 103 Weight and Balance, Ground Handling and Servicing, Cleaning and Corrosion Control	5	
AMT 104 Technical Preparation	5	
AMT 105 Materials and Processes	5	
AMT 110 Non-Metallic Structures and Welding	5	
AMT 111 Aircraft Sheet Metal Structures	5	
AMT 112 Airframe Systems I	5	
AMT 113 Airframe Systems II	5	
AMT 114 Airframe Systems III	5	
AMT 115 Airframe Systems IV	5	
	66	

f. Intended program duration in semesters for full-time students: *5 semesters*

g. Intended program duration in semesters for part-time students: *10 semesters*

h. Please indicate any prior education or work experience required for acceptance into the program. *None*

i. Describe any other special requirements for the program. *Calhoun Community College will seek an educational facility certificated by the FAA, under 14 CFR part 147, to train students in the knowledge and skills required for careers in the aviation maintenance industry.*

7.   Specific Rationale (Strengths) for Program-

a. What is the specific rationale for recommending approval of this proposal? List 3-5 potential program strengths:

1. *Calhoun Community College is located in the fastest-growing part of Alabama. With the growth in the aviation industry and the companies located in our service area, Aviation maintenance technicians are in demand.*
2. *Calhoun Community College is located beside Pryor Field and the partnership between the college and the airport is strong.*
3. *Multiple businesses have located or have announced plans to locate in Calhoun Community College's service area. They are requesting airframe and powerplant technicians.*
4. *Based on surveys from students there is overwhelming interest in the program if approved.*
5. *Light cast reports back up the demand for a trained workforce.*

b. Please list any external entities that have supplied letters of support attesting to the program's strengths. Attach support letters with the proposal.
Pryor Field Airport Authority, located directly beside the college, has provided a letter of support. Please see attached.

8. Program Resource Requirements

a. Faculty

1. Please provide or attach a brief summary of primary and support faculty that includes their qualifications specific to the program proposal. Note: institutions must maintain and have current and additional primary and support faculty curriculum vitae available upon ACHE request for as long as the program is active, but you do not need to submit a CV with this proposal.

2. Please provide faculty counts for the proposed programs:

Status	Faculty Type	
	Primary	Support
Current Full-Time	*1*	
Current Part-Time		
Additional Full-Time to be hired	*1*	1
Additional Part-Time to be hired	1	

Note: Annual compensation costs for additional faculty to be hired should be included in the NEW ACADEMIC DEGREE PROGRAM SUMMARY table. Hired on Rank: IA

Alabama Community College System
Schedule D-1
Full-time Instructors, Counselors and Librarians
2023-2024

Rank		Salary Step 0	1	2	3	4	5	6	8	10	15	20	25	27	30
IV	9-Month	60,501	62,104	63,702	65,302	66,905	68,504	70,107	71,706	73,306	78,109	82,911	87,712	89,313	92,513
	Summer	18,680	19,177	19,674	20,172	20,667	21,164	21,660	22,158	22,654	24,143	25,636	27,124	27,623	28,612
	12 Month	79,181	81,281	83,376	85,474	87,572	89,668	91,767	93,864	95,960	102,252	108,547	114,836	116,936	121,125
III	9-Month	54,465	56,066	57,667	59,268	60,869	62,470	64,068	65,669	67,270	71,431	75,592	79,755	81,356	83,918
	Summer	16,813	17,309	17,806	18,303	18,799	19,296	19,793	20,291	20,788	22,079	23,369	24,663	25,158	25,957
	12 Month	71,278	73,375	75,473	77,571	79,668	81,766	83,861	85,960	88,058	93,510	98,961	104,418	106,514	109,875
II	9-Month	50,071	51,671	53,273	54,873	56,472	58,073	59,673	61,275	62,876	66,077	69,278	72,479	74,079	75,680
	Summer	15,455	15,954	16,451	16,945	17,443	17,940	18,437	18,933	19,431	20,424	21,417	22,410	22,907	23,403
	12 Month	65,526	67,625	69,724	71,818	73,915	76,013	78,110	80,208	82,307	86,501	90,695	94,889	96,986	99,083
IA	9-Month	45,676	47,276	48,876	50,477	52,079	53,678	55,279	56,880	58,481	61,682	64,883	68,083	69,684	71,283
	Summer	14,102	14,598	15,095	15,592	16,088	16,587	17,083	17,580	18,077	19,069	20,063	21,055	21,553	22,047
	12 Month	59,778	61,874	63,971	66,069	68,167	70,265	72,362	74,460	76,558	80,751	84,946	89,138	91,237	93,330
IB	9-Month	41,282	42,883	44,482	46,085	47,685	49,284	50,887	52,486	54,089	57,287	60,489	63,690	65,291	66,891
	Summer	12,746	13,244	13,739	14,237	14,734	15,231	15,727	16,225	16,720	17,714	18,707	19,700	20,199	20,693
	12 Month	54,028	56,127	58,221	60,322	62,419	64,515	66,614	68,711	70,809	75,001	79,196	83,390	85,490	87,584
IC	9-Month	41,282	42,883	44,482	46,085	47,685	49,284	50,887	52,486	54,089	57,287	60,489	63,690	65,291	66,891
	Summer	12,746	13,244	13,739	14,237	14,734	15,231	15,727	16,225	16,720	17,714	18,707	19,700	20,199	20,693
	12 Month	54,028	56,127	58,221	60,322	62,419	64,515	66,614	68,711	70,809	75,001	79,196	83,390	85,490	87,584

Briefly describe the qualifications of new faculty to be hired:
Faculty will be required to hold a minimum of an associate's degree, have three years of infield-related experience, and be certified as an Aviation Airframe and Powerplant Technician by the FAA.

b. Staff
Support Staff will be required to have a minimum of a high school diploma and have 1 year of infield-related experience.

Will the program require dedicated staff?   Yes __x__ No_____

. 1 Full-time Faculty and 1 Full-time Lab Assistant.

Note: Annual compensation costs for staff to be hired should be included in the NEW ACADEMIC DEGREE PROGRAM SUMMARY table. Hired on Schedule D-1 Rank IA. Add 20% to cover taxes + $9,600 for health insurance. See the chart above for the base salary.

c. Equipment-
Will any special equipment be needed specifically for this program?

Yes _____x_____ No_____

If yes, please list the equipment. These costs should be included in the NEW ACADEMIC DEGREE SUMMARY TABLE.

d. Facilities

Will any new facilities be required specifically for the program?

Yes x____ No_____

If yes, please list. Only new facilities need to be listed. These costs should be included in the NEW ACADEMIC DEGREE SUMMARY TABLE.

e. Library- Add information from our current library that could be used.

Will additional library resources be required to support the program? *No*

Please provide a brief description of the current status of the library collections supporting the proposed program.
Calhoun's library has numerous titles related to aviation maintenance available in print and online. Below is a sample of what is currently available to students.

The following journals and primary source materials are available in the library:

Online Journals:
- Approach: The Naval Safety Center's Aviation Magazine
- Flying Safety
- Industrial Engineer
- PS: Preventive Maintenance Monthly

Print Books:
- Ventresca, Rudolph. Organizational Structure for Air National Guard Tactical Aircraft Maintenance. Maxwell Air Force Base, Ala.: Air University Press, 1991. UG 1243 .V46 1991

eBooks:
- Cutler, John. Understanding Aircraft Structures. John Wiley and Sons, Inc, 1999. EBSCOhost
- Hessburg, Jack. Air Carrier MRO Handbook : Maintenance, Repair, and Overhaul. McGraw-Hill Professional, 2000. EBSCOhost
- Tooley, Michael H. and David Wyatt. Aircraft electrical and electronic systems: principles, operation and maintenance. Boston: Routledge, 2009. EBSCOhost

If yes, please briefly describe how any deficiencies will be remedied, and include the cost in the NEW ACADEMIC DEGREE SUMMARY TABLE.

f. Assistantships/Fellowships-

Will the college offer any assistantships specifically for this program?

Yes__No__X_____

If yes, how many assistantships will be offered? N/A

The costs should be included in the NEW ACADEMIC DEGREE SUMMARY TABLE. See Excel Sheet below:

NEW ACADEMIC DEGREE PROGRAM PROPOSAL SUMMARY

CaLhoun Commuity College

Aviation Airframe   *Select Level:*

ESTIMATED *NEW* EXPENSES TO IMPLEMENT PROPOSED PROGRAM

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	TOTAL
FACULTY	101,012	101012	101012	101012	101012	101012	101012	707084
STAFF	123,000	123000	145000	145000	145000	150000	150000	981000
EQUIPMENT	465,000					245000		710000
FACILITIES	24000	24000	24000	45000	45000	5450000	0	5612000
LIBRARY								0
ASSISTANTSHIPS								0
OTHER	95000	95000	95000	95000	95000	95000	95000	665000
TOTAL	**808012**	**343012**	**365012**	**386012**	**386012**	**6041012**	**346012**	**8675084**

NEW REVENUES AVAILABLE FOR PROGRAM SUPPORT

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	TOTAL
REALLOCATIONS	0	0	0	0	0	0	0	0
EXTRAMURAL	0	0	0	0	0	0	0	0
TUITION	12185	15030	30060	30060	30060	30060	30060	177515
TOTAL	**12185**	**15030**	**30060**	**30060**	**30060**	**30060**	**30060**	**177515**

ENROLLMENT PROJECTIONS

Note: "New Enrollment Headcount" is defined as unduplicated counts across years.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	AVERAGE
FULL-TIME HEADCOUNT	Year 1 - No data reporting required	20	35	35	35	35	35	32.5
PART-TIME HEADCOUNT	Year 1 - No data reporting required	0	5	5	5	5	5	4.166666667
TOTAL HEADCOUNT	Year 1 - No data reporting required	20	40	40	40	40	40	36.66666667
NEW ENROLLMENT HEADCOUNT	Year 1 - No data reporting required	40	80	80	80	80	80	73.33333333

DEGREE COMPLETION PROJECTIONS

Note: Do not count Lead "0"s and Lead 0 years in computing the average annual degree completions.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	AVERAGE
DEGREE COMPLETION PROJECTIONS	Year 1 - No data reporting required	13	28	28	28	28	28	25.5

Validation 1:
Program revenues exceed or match expenses.   **NO-CHECK REVENUES**

Validation 2:
Students who graduated the prior year are not included in the total headcount.   **OK**

Validation 3: There are enough new students enrolling each year to sustain completions.   **YES**

Validation 4: Completion projections meet viability standard for this degree level.   **MET**

New entails <u>additional</u> expenses or revenues associated with program implementation. Please include any planning or start-up expenses within Year 1 (even if these were incurred in Year 0 or prior). Do not include expenses or revenues already budgeted for a department or instructional unit prior to the development of this specific program. For instance, if new faculty will be hired to teach in this program, salary/benefits should be included for each year following hire, but salary/benefits for existing faculty would not be included.

2023-2024 Additional Funding Requests														
Priority	Department	Campus	Item Description	qty	Unit Price	Recurring?	Fund	Org	Acct	Prog	Amount	Strategic Planning Reference/Justification	Additional Plant Related Expense	Plant Notes
?	Aviation	Decatur	Facilties	1	$ 110,000.00	?	?	?	?	?	$ 110,000.00	Upgrade-behind the fence building if we can find a partnership with KDCU		
?	Aviation	Decatur	Equipment	1	$ 825,000.00	?	?	?	?	?	$ 825,000.00	FAA Required Equipment		
?	Aviation	Decatur	Personnel	1	$ 92,000.00	?	?	?	?	?	$ 92,000.00	Program Director		
?	Aviation	Decatur	Regulation/accrediatation	1	$ 20,000.00	?	?	?	?	?	$ 20,000.00	FAA Aprrovals		
Total											$ 1,047,000.00		$ -	