Helena College Academic Program Review

Year:	2022-23	Review:	Aviation Maintenance Technology 2022-23	Author:	Steinwand, Bryon	Status:	Published

Section 1: Program Review

Credentials:

A.A.S. Aviation, C.A.S. Airframe, C.A.S. Powerplant

Description:

Aviation Maintenance Technology at HC will prepare students to become FAA certificated Airframe and Powerplant technicians.

Misson Statement:

The mission of the Aviation Maintenance Technology program at Helena College is to provide entry-level technicians who are trained in the fundamentals of aircraft maintenance with respect to general aviation and the light utility helicopter industry.

Mission Alignment:

Because AVMT supplies entry level technicians to the aerospace workforce, we help fulfill the college's mission of helping students to achieve their educational goals.

Additional Comments:

We are updating our class outcomes to match the new FAA outcome requirements. The FAA has recently changed the law updating the outcomes for aviation maintenance schools, prompting us to update our curriculum to align with the new FAA requirements.

Section 2: 5-Year Summary

Previous Recommendations:

Towards the goal of increasing AAS completion rates by integrating gen ed courses, tech writing and communications have been combined into a single class.
HC AVMT continues to develop relationships with industry partners. Specifically, we have had recent discussions with a new helicopter company in Montana, Heli One, which hopes to provide internship and employment opportunities to our students.
We recently received the generous donation of a working Cessna Citation business jet.
We have ordered, but not received, jacks for the Citation, and weighing load cells that can be used on all HC aircraft.
We purchased an LED black light used for non destructive inspection training.
We purchased a pitot-static test system adapter so we can run more accurate aircraft instrumentation test training.
Have also ordered but not received a roll swager tool for making control cables.

Annual Work Plans:

We have revised many times the curriculum to meet changing FAA requirements, as well as the school's requirements.
Implemented a summer semester in AVMT in order to provide complete curriculum within 2 years, and not have faculty in overload.
Working on funding and repair of paint booth.
Applied for a $500k grant from FAA, but were denied.
As above, obtained several big and small-ticket items to improve our program. Will continue to evaluate our ongoing equipment needs to meet changing industry requirements and keep us in alignment with the strategic plan of the college.

Successes/Strengths:

Transitioned to a summer semester to reduce workload on instructors and allow students time to work and go to school. This change has been well received by students and instructors.
We revised our curriculum to reflect the summer semester change, and received FAA and ASCR committee approval.
2 years later, the FAA completely rewrote the regulations regarding aviation maintenance schools. We revised our curriculum to reflect the new FAA changes, and submitted the changes through ASCR committee and got them approved. We then passed an FAA inspection recertifying AVMT to continue operations.
A Cessna Citation business jet was donated to the school, which has been a great addition to our training aids.
Have made steady progress on getting rid of old training aids and equipment, and general hangar organization.
HC AVMT has an 94% pass rate on FAA Airmen Certification exams (3-year average: 2020, 2021, 2022 through Q3)
79% of our grads are employed in MT at least one quarter following graduation (3-year average: AY2017-18, AY2018-19, AY2019-20)

Challenges:

It has been very challenging to keep up with all the curriculum changes in the last several years, prompted by FAA regulatory changes as well as school related changes to the curriculum.
Covid presented a large hurdle to overcome. The FAA requires us to complete minimum hours of hands-on, it was very difficult to meet those hour requirements and maintain social distancing, etc. in a school setting. We got special approval from the FAA and the BOR to continue operations and allow our students to graduate in a timely manner.
Funding is a constant challenge, with the price of commodities sharply rising as of late, and the general nature of trades programs being very expensive to run. Some of our consumable items have nearly doubled in price recently. Much of our equipment is quite dated, and is very expensive to replace. We have been trying to slowly update to more modern equipment, but have only been able to fund it through grants and donations. There are pieces of equipment in our hangar which literally date back to 1938 when the school opened.
Here some details about equipment needs:
Hydraulic press- The press we have is very old and worn out to the point it hardly works at all. It is also much larger than we really need. A hydraulic press is a very versatile piece of shop equipment. We could replace with a smaller one for around $500.
Aircraft tug- our current tug is a military surplus unit with a motor that does not run well. Whenever we need to move airplanes, we end up spending a lot of time fixing it.
Sheet metal hole punch- The one we have is old, worn, cumbersome to use, and often produces marginal results. This makes it frustrating when students are trying to do their best work but the equipment prevents that.
Heater trainer- We don’t have one right now. It would be very helpful to teach the operation and troubleshooting of combustion heaters that are in widespread use for midsize aircraft cabin heating.
Air cycle machine trainer- This would be in addition to the cabin pressurization trainer we have. Air cycle machines are commonly found in aircraft cabin pressurization/heating/cooling systems, but our trainer doesn’t have one.
Engine run stand- The one we have is tolerable, but deteriorated and often needs worked on which causes students and instructors alike stress when they are trying to run the engines that they overhaul. (each 2nd year AVMT student, in a team, will do a complete teardown and rebuild of an aircraft piston engine, then put it on the stand and run it.
Turbine engine run training system- We don’t have one at all at this time, as they are spectacularly expensive. Turbine engines (jet engines) are ubiquitous in aviation, and having a turbine engine training system that the students would be able to start, run and troubleshoot would be a very high impact educational experience for them.

Section 3: Student Learning

Credential Learning Outcomes:

Airframe CAS

1. Complete the required 1150 hours of instruction
2. Read and interpret Federal Aviation Regulations, aircraft service manuals, directives and bulletins to properly complete aircraft maintenance and repairs
3. Prepare logbook entries and prepare proper documentation for the repairs completed on an aircraft
4. Complete proper jacking procedures, ground handling and servicing on aircraft.
5. Prepare weight and balance computations and properly prepare the required documentation
6. Complete repair, inspection and maintenance on aircraft reciprocating and turbine engines and aircraft engine components and systems.
7. Prepare and complete the required repairs in accordance with approved repair procedures and data.
8. Return an aircraft to service after maintenance and repair
9. Adhere to safety procedures while reducing human factors.
10. Evaluate structural damage, sheet metal, welded structure, composite structure, fabric covering and finishes.
11. Troubleshoot, repair, and inspect electrical components and systems.

Aviation Maintenance Technology AAS

1. Complete the required 1900 hours of instruction
2. Read and interpret Federal Aviation Regulations, aircraft service manuals, directives and bulletins to properly complete aircraft maintenance and repairs
3. Prepare logbook entries and prepare proper documentation for the repairs completed on an aircraft
4. Complete proper jacking procedures, ground handling and servicing on aircraft.
5. Prepare weight and balance computations and properly prepare the required documentation
6. Adhere to safety procedures while reducing human factors.
7. Evaluate structural damage, sheet metal, welded structure, composite structure, fabric covering and finishes.
8. Prepare and complete the required repairs in accordance with approved repair procedures and data.
9. Troubleshoot, repair, and inspect electrical components and systems.
10. Inspect, remove and install non field repairable items such as propellers and aircraft instruments.
11. Return an aircraft to service after maintenance and repair.
12. Complete repair, inspection and maintenance on aircraft reciprocating and turbine engines and aircraft engine components and systems.
13. Prepare complete the required repairs in accordance with approved repair procedures and data.

Powerplant CAS

1. Complete the required 1150 hours of instruction
2. Read and interpret Federal Aviation Regulations, aircraft service manuals, directives and bulletins to properly complete aircraft maintenance and repairs
3. Prepare logbook entries and prepare proper documentation for the repairs completed on an aircraft
4. Troubleshoot, repair, and inspect electrical components and systems.
5. Return an aircraft to service after maintenance and repair.
6. Inspect, remove and install non field repairable items such as propellers and aircraft instruments.
7. Complete repair, inspection and maintenance on aircraft reciprocating and turbine engines and aircraft engine components and systems.

Assessment:

We assess our student through homework , quizzes, tests and lab projects. When we are administering tests and quizzes we use the FAA test bank as a basis or guideline for making those assessments. That helps prepare the students for their FAA testing. As we are showing a 94% pass rate in the FAA test data bank we believe that we are meeting the training needs of our students. Because of our program outcomes being changed and rearranged several times in the last several years we have not done a good job of assessing our courses using the assessment database. The other problem we have run into is the program outcomes cannot be mapped to our course outcomes because they no longer line up due to the changes. We have recently revised our program outcomes so they will line up with the course outcomes and they have been approved. The assessments that we have completed for our classes don’t show up in the database reports because we have not been able to map the courses to the program outcomes or credential outcomes. See the Aviation Assessment Reports spreadsheet attached.

Curriculum/Assessment Changes:

The FAA specifies the majority of our outcomes and we teach those outcomes to meet the FAA requirements. Deviation from those outcomes is not practical because of both time constraints and keeping our FAA certifications. We are the only aviation maintenance program in the state and we strive to maintain a rigorous learning environment.
Our class delivery methods are face to face and in the lab instructor-led training. Our students stay together as a cohort as they progress through our program.
Besides adding a summer semester and instructional blocks within each semester, we have also just recently revised our outcomes to meet new FAA requirements. The sweeping changes the FAA has put in place for aviation maintenance schools have affected all of our AVMT courses.
Previously the FAA specified the level of learning in the class subjects as Levels 1, 2, or 3. Level 1: knowledge but no practical skill, Level 2 knowledge and some practical skill, and Level 3 knowledge with proficiency.
Under the FAA's new Airman Certification Standards (ACS) there is no more Level 1, 2, and 3. They have been replaced by areas of Knowledge, Risk Management and Skills. The scope of the course is pretty much the same, just broken down into smaller, more detailed line items. In the knowledge and skills categories our current listed outcomes met these requirements.
With the addition of the Risk Management category, we had to revise each set of class outcomes to incorporate this category. The risk management section deals with procedure/process and safety as it pertains to doing maintenance. Below is a sample of the new ACS requirements for an individual class.
The outcomes (for the Aircraft Drawings portion only) of AVMT 110:
Subject B. Aircraft Drawings
Objective: The following knowledge, risk management, and skill elements are required for aircraft drawings.
Knowledge The applicant demonstrates understanding of:
AM.I.B.K1 Drawings, blueprints, sketches, charts, graphs, and system schematics, including commonly used lines, symbols, and terminology.
AM.I.B.K2 Repair or alteration of an aircraft system or component(s) using drawings, blueprints, or system schematics to determine whether it conforms to its type design.
AM.I.B.K3 Inspection of an aircraft system or component(s) using drawings, blueprints, or system schematics.
AM.I.B.K4 Terms used in conjunction with aircraft drawings, blueprints, or system schematics.
Risk Management The applicant demonstrates the ability to identify, assess, and mitigate risks associated with:
AM.I.B.R1 Interpretation of plus or minus tolerances as depicted on aircraft drawings.
AM.I.B.R2 Specifications for design of alterations and repairs.
AM.I.B.R3 Applicability of the drawing or schematic to the particular aircraft by model and serial number.
AM.I.B.R4 Identification of the current version and applicability of drawing being used.
Skills The applicant demonstrates the ability to:
AM.I.B.S1 Draw a sketch of a repair or alteration.
AM.I.B.S2 Identify the meaning of lines and symbols used in an aircraft drawing.
AM.I.B.S3 Interpret dimensions used in an aircraft drawing.
AM.I.B.S4 Identify changes on an aircraft drawing.
AM.I.B.S5 Determine material requirements from an aircraft drawing.
AM.I.B.S6 Interpret graphs and charts.

Section 4: Alignment with Community Needs

Community Partnerships:

We are a Boeing preferred school, so Boeing gives money for student scholarships and student minority groups that benefit our program. Currently the Aviation industry has a shortage of aircraft mechanics so we fill a vital industry role in Montana. Over the next 10 or more years that need is going to become greater, making our role more vital to the industry.
https://news.erau.edu/headlines/job-demand-is-sky-high-for-aviation-maintenance-grads (link to Embry-Riddle article on aviation maintenance personnel shortage)
Also see the attached Program Data Summary document for more information on job openings.

Advisory Board:

Our Advisory Board meetings and discussions inform us to industry needs and changes. During meeting discussions it was determined that more electronics and avionic was needed in our program to give students more knowledge in that area. Since our program outcomes are dictated by the FAA it was determined as unfeasible to incorporate more electronics into the aviation maintenance program, so a new program offering was determined to be the best option. We have received approval to start a Avionics program and are currently working on funding.
See Attachment for List of advisory committee members.

Section 5: Data Review

Enrollment/Annual Average FTE:

3 year average is 31
Our average enrollment has been very consistent, having an average number of students in our program from year to year. We cap our program at 20 students per semester. When we have lower numbers in first year we have had high numbers in second year and vise versa. Despite the colleges overall drop in FTE our program FTE has gone up.

Retention:

3 year average is 85%
Some students drop or transfer in the first two to three weeks of class because they decide Aviation Maintenance is not for them. We have a few that can't keep the grades up to meet our grading scale. Some others drop because of life/family issues or financial needs. The greatest seems to be life/family or financial. Our retention rate is higher than the average Helena College retention rate.

Degree/Certificate Production:

3 year average of degree/certificate is 51.2 percent. Our program has one AAS and two CAS degrees offered. All of them are on the same degree path but the two CAS degrees are three semesters of the 5 semesters in our program. The AVMT program graduation rate and degree production rate are both significantly higher than the average Helena College rates.
Some students in our program are not interested in getting their AAS in Aviation Maintenance Technology, so they do not take the general education requirements, (currently Tech Math and Communications.) They simply want to take the required amount of hours of instruction in order to take the FAA tests and get their Airframe and Powerplant certificate. The disadvantage of this is that they are leaving some education "sitting on the table" that is already paid for in their tuition. If they decide later that they want to pursue a degree they will need to take courses that they could have had for free. There is anecdotal evidence that job seekers having an A&P certificate and an AAS may have some advantage in competing for employment. We are usually successful in persuading them to take the Gen Eds because they are in school anyway and the price is all the same, but some cannot be convinced. Other than the above mentioned tactics, we have not found a better way to encourage them to seek their AAS.

Market Analysis:

Currently the Aviation industry is experiencing a short fall of mechanics. With a projected shortfall of mechanics (according to Boeing research and analysis) of over 600,000 globally in the next 17 years, this shows there is a need for schools to increase the number of mechanics they are training.
https://news.erau.edu/headlines/job-demand-is-sky-high-for-aviation-maintenance-grads (link to Embry-Riddle article on aviation maintenance personnel shortage0
We not only supply mechanics locally to meet Montana industry needs but we meet those needs globally. Even though our program does not have high numbers of graduates going out into the industry we still make a large impact. If you were to inquire with aviation maintenance shops in Montana you would find that very few of them do not have a graduate of Helena College working in their shops and in some cases the owners/ managers are graduates of our school. Graduates are going into a maintenance field that is in high need of trained and qualified employees. The wages are increasing at a rapid rate and we are seeing a lot of benefit increases. From everything I have read this need is only going to get greater. The industry is currently seeing a shortage in mechanics and pilots and that shortage is going to become greater over the next 10 years creating large gaps in the industry. We are already seeing the effects with a large number of airline flight cancellations some may be due to maintenance shortfalls.
We have students that are coming from a military career and want to go into the civilian industry. We provide that training gap for those individuals to succeed in the civilian industry, retraining them for a new career path. We usually have several in our program at any given time.

Our students go to work all over the US and a few end up in other countries. We have a good number of students who end up in Alaska working to support their large aviation industry. I have a student who works for Space X. I have a student that works for Pratt and Whitney a major engine manufacturer. I have a student who work overseas for a Mission Aviation organization as a mechanic/pilot. These are some examples of where our students go to work. In reality they are scattered everywhere. We have major air carriers come to our school and recruit our students and hire them. Most of these students end up in larger cities where these major operators have maintenance hubs.
We have students that continue their education after they complete our program. I have had students go into aerospace engineering, business management or become commercial pilots.

Financial Impact per FTE:

On average HC programs bring in a total revenue of 11,019/FTE. Our program expends on average 6,300/FTE, which is 19% lower than the Helena College average expenditure /FTE. Our enrollment and retention on the average is higher than in other programs at HC, so this helps reduce our cost per FTE. Student fees only cover a small percentage of what it actually costs for materials. In the future we will not be able to reduce program costs because our materials have been doubling in price every few years. We have tried reducing the amount of materials to fit our budget but will not be able to reduce the amount of materials going forward. With the increased cost of materials we will be spending more per FTE than we have in previous years. This increase in material costs for the futures is only going to make it harder to fund our program.

Other Comments:

Section 6: Resources

Faculty & Staff:

Name	Title	FTE	Years	Highest Education
Tod Dumas	Aviation Technology Instructor	1.00	15.00	HS Grad
Wesley Walker	Aviation Technology Instructor	1.00	6.00	Prof Cert

Professional Development:

Tod Dumas
Montana Aviation Conference and IA refresher 2020
Snap-On NC3 Torque Certification Training

Wesley Walker
Attended Montana Aviation Conference in Missoula in March 2020.
Attended Aviation Technician Education Council conference in Fort Worth March 2022.

Budget:

To save money in our budget we have applied for and received grant money to buy more expensive pieces of equipment and tooling. This can have its limitations as well because if we need a piece of equipment it may take 2-4 years to acquire.

Resource Needs:

Because of our advisory committee recommendations we are trying to fund the startup of an Avionic repair program. Funding for initial startup will take a significant amount of money. We have applied for a grant and been denied and are currently looking at other funding streams. The addition of this program will make students more desirable to the industry and can increase their income. This will also benefit the employers by fulfilling a skill set that is in high demand.
We have also applied for state funding to build or acquire a new aircraft hanger to house the Aviation Maintenance program. We are hoping to increase enrollment in response to the industry needs, while creating much needed space at our current campus location for other program expansion. We will need to add an instructor for the Avionics program. Additionally If enrollment increases in our Maintenance program beyond 25 students per instructor, by FAA requirements we will need to add another instructor.

Section 7: Recommendations

Rec #	Title	Recommendation
1	Avionics program	Key Recommendation: Plan and layout of a new avionics training program at HC. Rationale: Because of our advisory committee recommendations we are trying to fund the startup of an Avionic repair program. This course would be an additional credential for our students after completing the maintenance courses. This will make students more desirable to the industry and can increase their income. This will also benefit the employers by fulfilling a skill set that is in high demand. Success Target: A major key indicator at this point in the process is making enough room for the proposed program and analyzing operational expenses. This will be addressed better in block D1 and Recommendation 2 Success Strategy: Perform a startup and operational cost assessment to show program feasibility. Find and apply for grants that the proposed avionics program would be appropriate for. Success Resource: To add an avionics program would require expansion of the facility, which we have no room for. This problem will be addressed in Recommendation 2. It will also require a significant amount of money for the training aids. We estimate it could cost $150,000 to get started on this, with additional equipment and training aids as technology changes. This additional estimated cost will be about $30,000 on average per year. We would need to hire a dedicated instructor that has a significant amount of field experience with avionics. Resp. Party: Aviation Maintenance Technology APRC Response: • A new hangar is not necessary to start an avionics program, but current space would be crowded and require creative schedule to accommodate all instruction. • Avionics will be a separate CAS: one summer of CAS-specific courses and another semester of 5 already offered for AVMT AAS. • Challenges: o May be challenging to find faculty due to pay, but the program has been approached by an individual interested in teaching. o Bigger challenge is funding for equipment and the college will need to strategize priorities between equipment and an instructor. Suggestion to include a replacement/upgrade schedule and estimate of costs in the recommendation • Not many shops in Helena currently doing avionics work, but demand is growing. Grads likely to leave the state for employment, but it may also attract out-of-state students Cabinet Feedback: Cabinet supports exploring this academic program based on industry need and guidance from our advisory board. This should be a second step, upon completion of review of AVMT curriculum to align with new FAA guidelines. The exploration of program should be holistic and adding avionics without that review could create inefficiencies and challenges.

2	Space and equipment assesment	Key Recommendation: Evaluate equipment and space needs in the AVMT facility. Rationale: Starting an avionics program (recommendation 1)will require more room, which we are already short on. Moving AVMT to a new facility would free up space for expansion of other programs here at the Airport Campus. Moving to a new facility would allow us to increase our enrollment in AVMT in response to industry needs. Evaluate the facility and space requirement to accomplish this goal. Success Target: Evaluate the space and equipment used currently in the AVMT program. Then evaluate and participate in developing requirements for new space and equipment to meet the needs of our program. Success Strategy: Instructors and department chair will come up with needed space and equipment requirements. Then evaluate budgeting needed to accomplish the above evaluation. Success Resource: Instructors and department chair will come up with needed space and equipment requirements. Then evaluate budgeting needed to accomplish the above evaluation. Resp. Party: Aviation Maintenance Technology APRC Response: • Funding to purchase a new hangar to house the entire AVMT program is still going through the legislature, due to be signed in May. o Likely 3-5 years to complete purchase and renovations. Timeline is tight for inclusion as a recommendation for the next five-year period, but good that the process is started at the legislature. o A nearby hangar is likely going up for sale in July, so we are hoping not to miss the opportunity to purchase it Cabinet Feedback: As we await the LRBP funding for a new hangar, it is the right time to examine and document our space and equipment needs for the entire AVMT program.

3	AVMT Curriculium	Key Recommendation: Evaluate new FAA requirement and reorganize the program layout and credits to better meet the student needs and still meet FAA standards. Rationale: The FAA last year change the regulations and we have met the new requirements. But because of changes we can reevaluate the layout and subjects we teach and streamline our program to better fit student learning. Success Target: The restructure and reorganization of the program classes. Success Strategy: Evaluate each class and its content, layout, and credits. Submit needed revisions to restructure classes as we go through the evaluation process. Implement changes by Fall of 2025. Success Resource: Evaluate each class and its content, layout, and credits. Submit needed revisions to restructure classes as we go through the evaluation process. Resp. Party: Aviation Maintenance Technology APRC Response: Cabinet Feedback: This goal was added as a result of conversation with Dean's Cabinet. The first step in determining what the addition of an avionics program could be must be alignment of existing AVMT program with new FAA guidance. This will allow a holistic look at course delivery and timing.

Section 8: APRC Committee Proposed Determination & Rationale

APRC Proposed Determination:

Continue

APRC Rationale:

Program appears to have a good feel for market, community, and student needs. Addition of avionics appears to be a big lift, but the program has thoughtfully considered the new program and the addition of a hangar for more space.

APRC Additional Feedback:

• What opportunities exist for industry to support the college program in addition to providing student scholarships?
o Industry is more willing to fill shortages in-house rather than working with colleges
o Some liability concerns from larger manufacturers; private shops may be more willing to support programs
o Most scholarships have been around since before the shortage, few new scholarships in recent years
• AVMT relies on Perkins to fund major purchases, such as equipment
• AVMT generally brings in more fees than they spend, though cost of materials have been increasing recently. Additional research into fees for similar programs at other schools may support increasing course fees.
o Possible peers: Spokane Community College, University of North Dakota, Moses Lake, Idaho Falls, Klamath Community College
• Hours of instruction requirement eliminated as of Fall 2022.
o Program is working on revisions for 38 outcomes due to FAA changes – both course and program

Section 9: Dean's Cabinet Feedback

Dean's Cabinet Approval of APRC Determination:

Approve APRC Determination

Overall Cabinet Feedback:

The department should be commended on their enrollment and retention rates, as well as for the pass rate of their students on the FAA exams for airframe and powerplant licensure! We agree with the importance of the recommendations set by the faculty and have added comments/suggestions to clarify the recommendations.

Section 10: Final Determination for BOR Report

Final Determination for BOR Report:

Continue

Supporting Rationale:

The Aviation Maintenance Technology program at Helena College provides students with a marketable degree in a high-demand and well-paying industry. It continues to demonstrate satisfactory enrollment, higher-than-average retention and graduation rates, and outstanding pass rates on FAA licensing exams. Program faculty possess a good understanding of the job market at the local, state, national, and global levels, as well as both community and student needs. The program makes frequent curriculum changes in response to FAA requirements.
The program has plans to pursue adding an avionics degree in response to advisory board input and growing need for these new skills. In addition to the need to identify funding sources for equipment and an additional instructor, the curriculum will need to be evaluated for ways to streamline the pathways to support student learning and the addition of the avionics courses.
The program also plans to evaluate their equipment and space needs to ensure there is room and funding to add and maintain avionics equipment. Purchase of a separate hangar is currently in the works, but an additional instructional site brings many challenges.
The program completed a program review for a three-year period instead of a five-year period to accommodate changes in the program review annual rotation.

Attached Files

Attachment #	Attachment Title	Attachment URL
57	Data Summary	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=57
58	CT Program Review	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=58
59	Assess Matrix V1	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=59
61	Assess Matrix V1	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=61
62	ITP Curriculum Changes	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=62
63	Annual Work Plan 5-Year Summary	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=63
65	Assess Report	http://hc-curriculum.helenacollege.edu/ViewAttachment.aspx?id=65

Annual Work Plan 4-Year Summary AVMT

Plan Developer	Year Code	Goal #	Strategic Goal Objective	Goal Status	Action Item	Indicators	Mid-Year Update	Results	Future Actions
Dumas, Tod	2018-19	1	SG1.1	Not Completed	Helena College faculty will work with professional FAA approved testing entity to obtain the ability to test Helena College students at the Helena College campus to obtain their Airframe and Powerplant license.	Successful attainment of the ability to administer tests for aviation students.	NULL	Applied for and submitted application to PSI for a testing center. PSI denied us a testing center after reviewing the areas need.	Keep reapplying and bugging PSI until they grant us approval for a testing center.
Dumas, Tod	2018-19	2	SG5.1	Not Completed	Faculty and Division Chair will work to update Federally regulated Helena College Operations Manual to include the new summer semester curriculum offering and updated hours and course schedule.	Successful approval of Helena College Operations Manual for Aviation Technology Program by FAA.	NULL	Completed revision of the FAA approved operations manual and submitted the revision for FAA review and approval. Have not had revision approved as of this time.	Waiting on FAA approval of revision. when it is approved and signed by an FAA inspector we will incorporate the revision into our operations manual.
Dumas, Tod	2018-19	3	SG1.1	Not Completed	Update existing equipment and add new technology to aviation program to ensure students receive a meaningful and rigorous experience at Helena College.	Aviation faculty will research areas within the program that need updated technology. Aviation faculty will relay this to Division Chair and Budget Management Team and use grant funding and college budget to update program and technology.	NULL	updated our black light for florescent inspection used in both dye and magnetic particle to the newest LED version. Have ordered a roll swager for building control cables but have not received it at this time.	continue to work on budgeting for upgrading and improving equipment.
Dumas, Tod	2018-19	4	SG1.1	Not Completed	Update existing equipment and add new technology to aviation program to ensure students receive a meaningful and rigorous experience at Helena College.	Aviation faculty will research areas within the program that need updated technology. Aviation faculty will relay this to Division Chair and Budget Management Team and use grant funding and college budget to update program and technology.	NULL	updated our black light for florescent inspection used in both dye and magnetic particle to the newest LED version. Have ordered a roll swager for building control cables but have not received it at this time.	continue to work on budgeting for upgrading and improving equipment.
Dumas, Tod	2019-20	1	SG1.1	Completed	Helena College faculty will work with professional FAA approved testing entity to obtain the ability to test Helena College students at the Helena College campus to obtain their Airframe and Powerplant license.	Successful attainment of the ability to administer tests for aviation students.	NULL	Contacted Testing center administrator PSI. they have denied our application on the grounds that we are not going to do enough testing in each quarter to warrant them placing a testing center at our facility. I have contacted the FAA and they cannot help us in getting a testing center in place. they inspect and enforce the operations of PSI but not the placement of testing centers. That is up to PSI where they choose to place testing centers.	II will approach PSI again at a later date and resubmit our application for a testing center.
Dumas, Tod	2019-20	2	SG5.1	Completed	Faculty and Division Chair will work to update Federally regulated Helena College Operations Manual to include the new summer semester curriculum offering and updated hours and course schedule.	Successful approval of Helena College Operations Manual for Aviation Technology Program by FAA.	NULL	Completed the large revision to our operations manual and submitted it to the FAA for approval. FAA approved our revision and we are operating under the new revision.	Continue to work with the FAA in updating and completing the operations manual. Manual has been submitted and is in the process of being updated for second round of review by the FAA. We will continue to update and revise our Operations Manual as needed.

Annual Work Plan 4-Year Summary AVMT

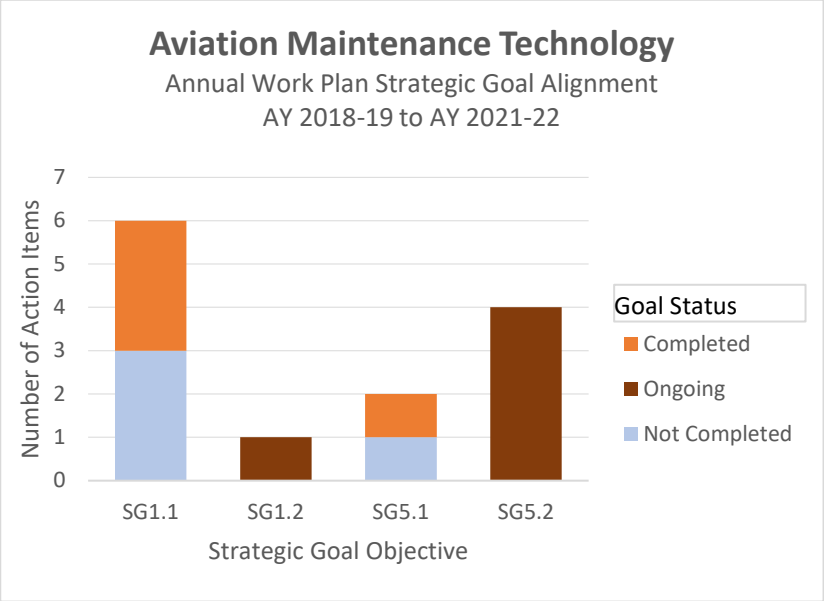
Plan Developer	Year Code	Goal #	Strategic Goal Objective	Goal Status	Action Item	Indicators	Mid-Year Update	Results	Future Actions
Dumas, Tod	2019-20	3	SG1.1	Completed	Update existing equipment and add new technology to aviation program to ensure students receive a meaningful and rigorous experience at Helena College.	Aviation faculty will research areas within the program that need updated technology. Aviation faculty will relay this to Division Chair and Budget Management Team and use grant funding and college budget to update program and technology.	NULL	updated equipment used for pitot static testing and calibration of altitude and airspeed instruments by purchasing a pitiot static port adapter that will decrease the chance of damaging an instrument installed in an aircraft during the testing process. Purchased updated precision measuring tools for the materials and processes class. This allows students to use updated tools for learning how to used precision measuring equipment without needing to share with the reciprocating engines class that is running at the same time in second year.	Apply for Perkins grant funding to update equipment. Apply for funding to send an instructor to nc3 training.
Dumas, Tod	2020-21	1	SG1.2	Ongoing	Helena College faculty will work with professional FAA approved testing entity to obtain the ability to test Helena College students at the Helena College campus to obtain their Airframe and Powerplant license.	Successful attainment of the ability to administer tests for aviation students.	NULL	Due to covid the majority of testing centers were closed and not able to participate in this discussion and therefore this goal will be moved forward to next year.	We will look into this next year.
Dumas, Tod	2020-21	2	SG1.1	Completed	Faculty and Division Chair will work to update Federally regulated Helena College Operations Manual to include the new turbine engine classes to lineup with block style delivery updated hours and course schedule	Successful approval of Turbine Engine section of Helena College Operations Manual for Aviation Technology Program by FAA.	NULL	Mid year review- revision is submitted to the FAA and waiting for their feedback to finalize the revision. FAA gave feedback and we will make any changes requested and submit final document.	This will be completed at the end of the academic year.
Dumas, Tod	2020-21	3	SG5.2	Ongoing	Update existing equipment and add new technology to aviation program to ensure students receive a meaningful and rigorous experience at Helena College.	Aviation faculty will research areas within the program that need updated technology. Aviation faculty will relay this to Division Chair and Budget Management Team and use grant funding and college budget to update program and technology.	NULL	Mid Year review- 1: Have identified the need for a new load cell scale system for weighing of Aircraft. Our current unit will not zero and factory support indicates that our unit is not repairable because of its age. will apply for Perkins funding to help replace bad unit. 2: Paint booth computer has failed making it unusable. Have requested bid for repair and upgrade of paint booth. Have been working with maintenance on bids for erecting a building around the paint booth and securing funding. This structure will protect the paint booth, allow for operation during cold weather and reduce the operating costs of the paint booth.	A grant has been applied for through the FAA for $500,000 if this grant is awarded we will use it to purchase this equipment. Maintenance is currently working on a separate grant to update the paint booth system. This will be an ongoing goal pending funding.

Annual Work Plan 4-Year Summary AVMT

Plan Developer	Year Code	Goal #	Strategic Goal Objective	Goal Status	Action Item	Indicators	Mid-Year Update	Results	Future Actions
Dumas, Tod	2021-22	1	SG5.2	Ongoing	Update existing equipment and add new technology to aviation program to ensure students receive a meaningful and rigorous experience at Helena College.	Aviation faculty will research areas within the program that need updated technology. Aviation faculty will relay this to Division Chair and Budget Management Team and use grant funding and college budget to update program and technology.	Working with Wes and work study student to come up with drawings to build fixture for supporting aircraft so we can jack it for landing gear training.	We had the students take the wings off the aircraft so the fuselage can be put on a fixture that is yet to be built. Progress is difficult given existing faculty workload.	Discuss with all AVMT personnel about how to construct a fixture that supports the entire aircraft fuselage.
Dumas, Tod	2021-22	2	SG5.2	Ongoing	Evaluate older equipment, tools, training supplies. Clean out items that are no longer relevant to the instructional outcomes or are worn and damaged. This will also make more room for existing equipment.	Evaluate and catalog equipment and increase room for existing equipment that has more usable and accessible work areas.	utilizing the work study program to help organize and clean up areas that are in need of reorganization. In the process of completing several projects.	This was quite successful this year, but more work needs done. Work studies were an effective way to accomplish this goal.	Need to recruit another work study or two, as the current ones have moved on.
Dumas, Tod	2021-22	3	SG5.2	Ongoing	Clean up facility. Throw away old unused parts. Organize tools and equipment.	We expect to have the facility look and function better than before, as evidenced by a reduced stress factor in trying to find stuff we need at any given time.	Work studies have tackled the clean up with help of faculty. There is already a noticeable reduction in clutter. More work needs to be done.	We've had good success in having work studies begin a deep cleaning and organization of parts and equipment. This is somewhat of a moving target because as we clean, etc. we often uncover more projects that need some specific attention.	Actively recruit more work studies to continue the work of the ones who have now moved on.

Annual Work Plan 4-Year Summary AVMT

Count of Strategic Goal Objective	Column Labels			
Row Labels	**Not Completed**	**Ongoing**	**Completed**	**Grand Total**
SG1.1	3		3	6
SG1.2		1		1
SG5.1	1		1	2
SG5.2		4		4
Grand Total	**4**	**5**	**4**	**13**



Term Code	NameId	# of Planned Assessments	# of Term Assessments	Complete Term Assessments	% Complete Term Assessments	# Section Assessments	# Complete Section Assessments	% Complete Section Assessments
201930	AVMT~1	0	0	0	0	0	0	0
201950	AVMT~1	0	0	0	0	0	0	0
201970	AVMT~1	0	0	0	0	0	0	0
202030	AVMT~1	0	0	0	0	0	0	0
202050	AVMT~1	0	0	0	0	0	0	0
202070	AVMT~1	1	0	0	0	0	0	0
202130	AVMT~1	53	26	6	23.0769	26	18	69.2308
202150	AVMT~1	21	20	16	80	20	16	80
202170	AVMT~1	123	62	56	90.3226	62	56	90.3226
202230	AVMT~1	132	29	27	93.1034	29	27	93.1034
202250	AVMT~1	132	18	11	61.1111	18	11	61.1111

Term	Course	# of Term Assessments	# of Term Assessments Met Target	% of Term Assessments Completed	% of Term Assessments Met Target
201970	AVMT225	0	0	0	0
201970	AVMT230	0	0	0	0
201970	AVMT240	0	0	0	0
201970	AVMT250	0	0	0	0
201970	AVMT130	0	0	0	0
201970	AVMT120	0	0	0	0
201970	AVMT125	0	0	0	0
201970	AVMT115	0	0	0	0
201970	AVMT100	0	0	0	0
201970	AVMT105	0	0	0	0
201970	AVMT110	0	0	0	0
202030	AVMT235	0	0	0	0
202030	AVMT245	0	0	0	0
202030	AVMT255	0	0	0	0
202030	AVMT150	0	0	0	0
202030	AVMT135	0	0	0	0
202030	AVMT140	0	0	0	0
202050	AVMT160	0	0	0	0
202050	AVMT170	0	0	0	0
202050	AVMT180	0	0	0	0
202070	AVMT115	0	0	0	0
202070	AVMT110	0	0	0	0
202070	AVMT225	0	0	0	0
202070	AVMT230	0	0	0	0
202070	AVMT240	0	0	0	0
202070	AVMT250	0	0	0	0
202070	AVMT125	0	0	0	0
202070	AVMT130	0	0	0	0
202070	AVMT100	0	0	0	0
202070	AVMT120	0	0	0	0
202070	AVMT105	0	0	0	0
202130	AVMT145	6	5	83.3333	100
202130	AVMT150	0	0	0	0
202130	AVMT135	5	0	0	0
202130	AVMT175	2	0	0	0
202130	AVMT187	4	0	0	0
202130	AVMT140	0	0	0	0
202130	AVMT235	0	0	0	0
202130	AVMT237	0	0	0	0
202130	AVMT245	0	0	0	0
202130	AVMT255	0	0	0	0
202150	AVMT155	7	7	100	100
202150	AVMT160	0	0	0	0
202150	AVMT165	4	4	100	100

Term	Course	# of Term Assessments	# of Term Assessments Met Target	% of Term Assessments Completed	% of Term Assessments Met Target
202150	AVMT170	0	0	0	0
202150	AVMT180	0	0	0	0
202150	AVMT185	4	4	100	100
202170	AVMT100	6	5	100	83.3333
202170	AVMT115	12	12	100	100
202170	AVMT110	8	8	100	100
202170	AVMT130	0	0	0	0
202170	AVMT120	2	2	100	100
202170	AVMT125	5	5	100	100
202170	AVMT105	6	3	100	50
202170	AVMT225	6	6	100	100
202170	AVMT230	3	2	100	66.6667
202170	AVMT240	3	3	100	100
202170	AVMT250	2	2	100	100
202230	AVMT145	4	4	100	100
202230	AVMT150	3	3	100	100
202230	AVMT135	6	6	100	100
202230	AVMT175	4	4	100	100
202230	AVMT187	5	5	100	100
202230	AVMT140	5	5	100	100
202230	AVMT235	2	0	0	0
202230	AVMT237	0	0	0	0
202230	AVMT245	0	0	0	0
202230	AVMT255	0	0	0	0
202250	AVMT155	6	6	100	100
202250	AVMT160	0	0	0	0
202250	AVMT165	3	3	100	100
202250	AVMT170	0	0	0	0
202250	AVMT180	0	0	0	0
202250	AVMT185	2	2	100	100

TermCode	# Course Outcomes Mapped to Credential Outcome
201970	0
202030	0
202050	0
202070	0
202130	0
202150	10
202170	10
202230	10
202250	10

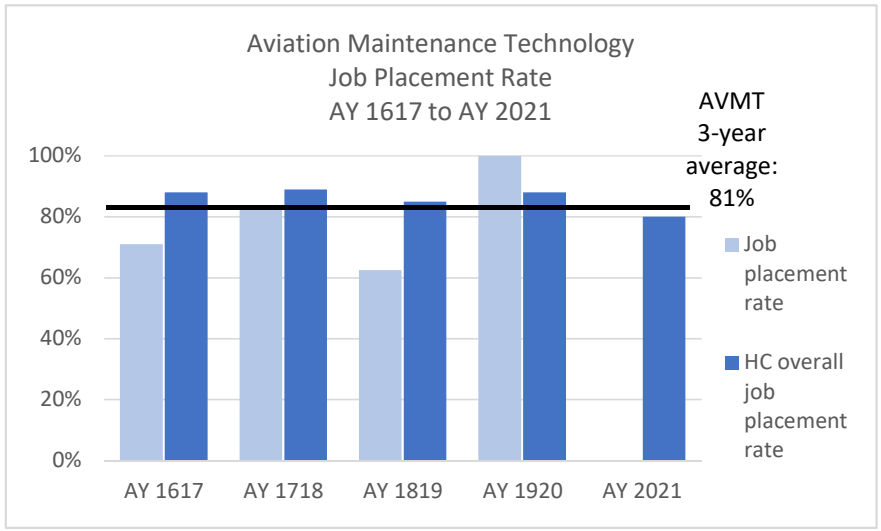
Faculty Author	FullName	ShortName	CreationDate	Status
Dumas, Tod	Curriculum revision for ENGINE ELECTRICAL	Revision to AVMT245	1/14/2020	Completed
Dumas, Tod	Curriculum revision for PROPELLERS AND	Revision to AVMT255	1/14/2020	Completed
Dumas, Tod	Curriculum revision for TURBINE ENGINES AND	Revision to AVMT235	1/14/2020	Completed
Dumas, Tod	New Course: AVMT137 Turinbe Engine Systems 2	New Course: AVMT137	1/14/2020	Completed
Walker, Wesley	Curriculum revision for AIRCRAFT ELECTRICAL	Revision to AVMT175	4/9/2020	Completed
Walker, Wesley	Curriculum revision for CABIN ATMOSPHERE	Revision to AVMT185	4/9/2020	Completed
Walker, Wesley	Curriculum revision for INTRODUCTION TO	Revision to AVMT100	5/24/2021	Completed
Walker, Wesley	Curriculum revision for MATERIALS AND	Revision to AVMT115	6/7/2021	Completed
Walker, Wesley	Curriculum revision for MAINTENANCE	Revision to AVMT125	6/7/2021	Completed
Walker, Wesley	Curriculum revision for BASIC AERODYNAMICS	Revision to AVMT130	6/7/2021	Completed
Walker, Wesley	Curriculum revision for ASSEMBLY AND RIGGING, AND AIRFRAME INSPECTION	Revision to AVMT135	6/7/2021	Completed
Walker, Wesley	Curriculum revision for SHEET METAL	Revision to AVMT140	6/7/2021	Completed
Walker, Wesley	Curriculum revision for WOOD STRUCTURES	Revision to AVMT150	6/7/2021	Completed
Walker, Wesley	Curriculum revision for AIRCRAFT WELDING	Revision to AVMT160	6/7/2021	Completed
Walker, Wesley	Curriculum revision for AIRCRAFT LANDING GEAR	Revision to AVMT170	6/7/2021	Completed
Walker, Wesley	Curriculum revision for INTRODUCTION TO	Revision to AVMT100	9/26/2022	Completed
Walker, Wesley	Curriculum revision for BASIC ELECTRICITY	Revision to AVMT105	9/26/2022	Completed

AVMT Asssessment Matrix

No results for other terms options

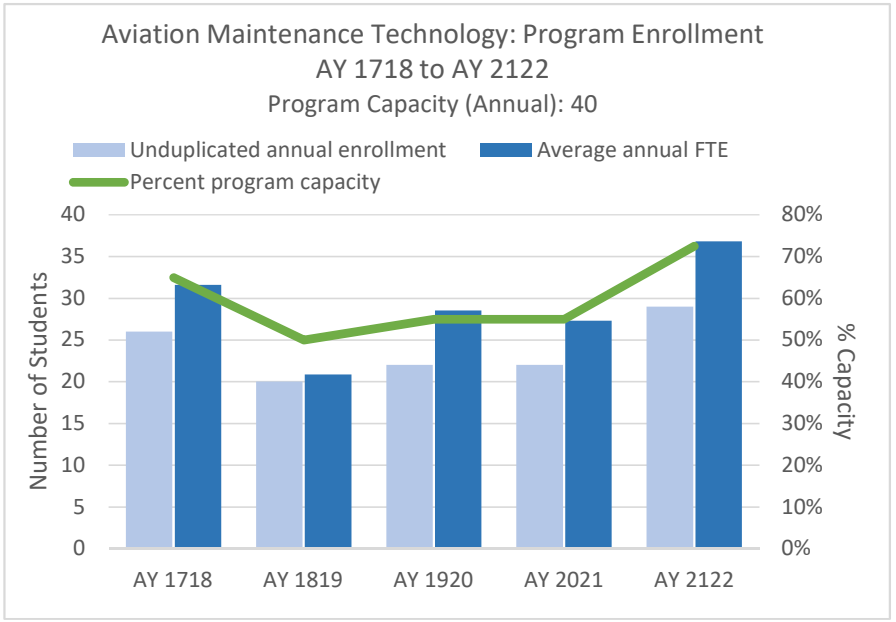
The reports do not reflect very many results due to the lack of mappings from course outcome to credential outcome.
I would recommend completing mapping for all courses.

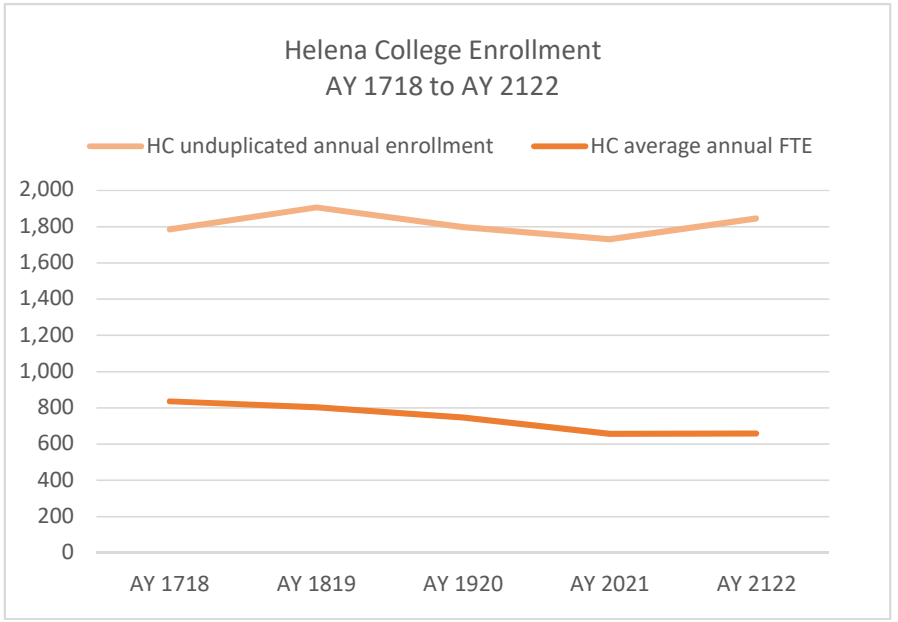
Program Review Data Summary - Aviation Maintenance Technology									AY 2018-19 to AY 2021-22
Market Analysis									Completed 10/14/2022
Metric	**Current MT (2020)**	**Projected MT (2030)**	**Annual Projected MT**	**Current U.S. (2020)**	**Projected U.S. (2030)**	**Annual Projected U.S.**		**Program Notes**	**Source**
Job openings from related occupations	450	500	50	130,100	145,400	12,700		See "Occupations" tab	Career OneStop, U.S. Dept. of Labor
Percent change in job openings for related occupations		11%			12%				Career OneStop, U.S. Dept. of Labor
Median hourly wage/annual salary for related occupations	$60,520 annual	$29.10 hourly		$65,380 annual	$31.43 hourly				Career OneStop, U.S. Dept. of Labor
Program Data									
Metric	***AY 1617***	***AY 1718***	**AY 1819**	**AY 1920**	**AY 2021**	**3-Year Avg**	**% Change 3 Years**	**Program Notes**	**Source**
Job placement rate	*71%*	*83%*	63%	100%	n/a	81%			Montana University System Grads Finding Work in MT dashboard
HC overall job placement rate	*88%*	*89%*	85%	88%	80%	84%	-5%		
Student applications								*N/A for this program*	
Students accepted								*N/A for this program*	
Acceptance rate								*N/A for this program*	

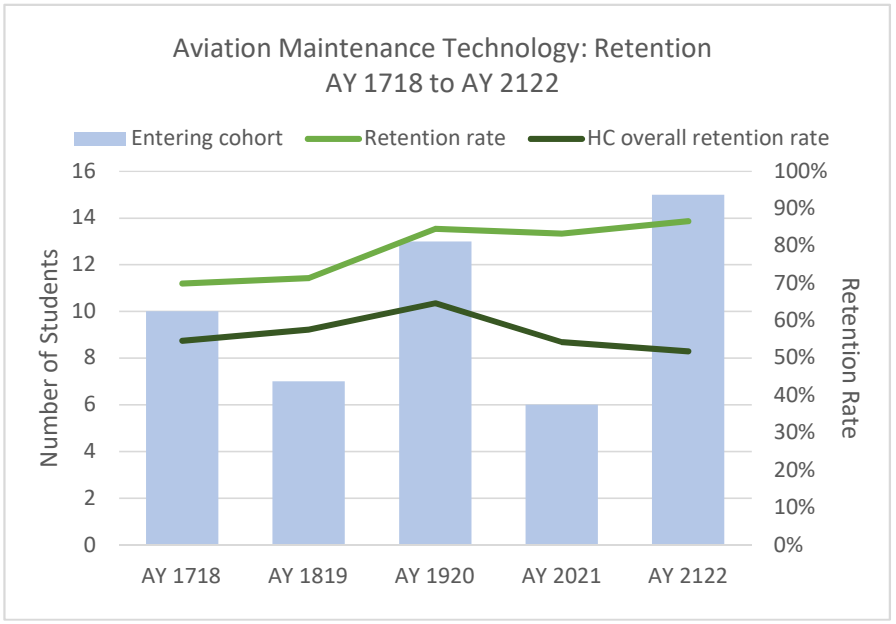

Aviation Maintenance Technology
Job Placement Rate
AY 1617 to AY 2021
AVMT
3-year
average:
81%
100%
80%
60%
40%
20%
0%
AY 1617
AY 1718
AY 1819
AY 1920
AY 2021
Job placement rate
HC overall job placement rate

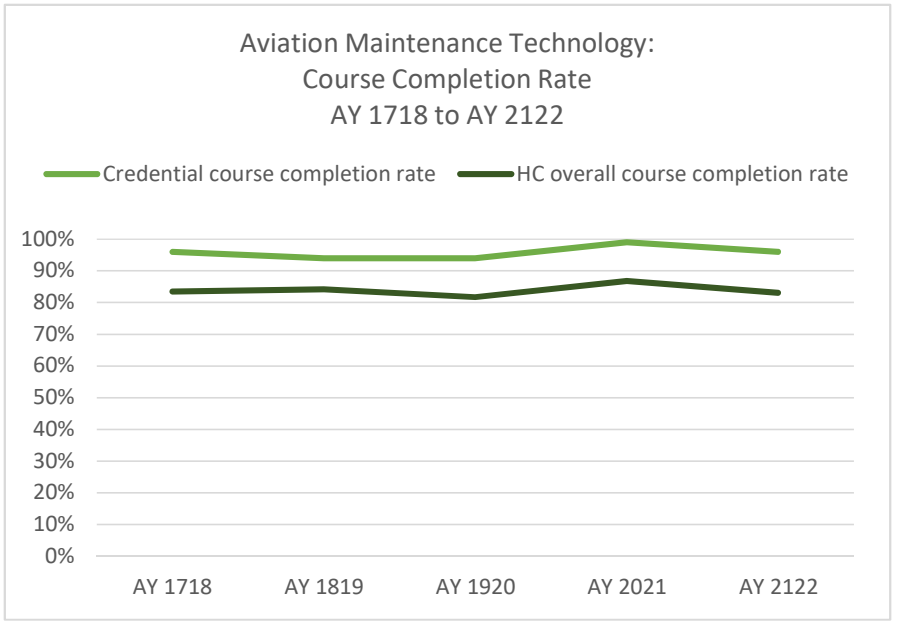
Program Review Data Summary - Aviation Maintenance Technology									AY 2018-19 to AY 2021-22
Student Participation and Success									Completed 10/18/2022
Metric	*AY 1718*	*AY 1819*	**AY 1920**	**AY 2021**	**AY 2122**	**3-Year Avg**	**% Change 3-Years**	**Notes**	**Source**
Program capacity	*40*	*40*	40	40	40	40	0%		Program Records
Unduplicated annual enrollment	*26*	*20*	22	22	29	24	32%		Institutional Research
HC unduplicated annual enrollment	*1,785*	*1,906*	1,797	1,730	1,846	1791	3%		Institutional Research
Percent program capacity	65%	50%	55%	55%	73%	61%	18%		Institutional Research
Average annual FTE	*32*	*21*	29	27	37	31	29%	Program FTE increased despite HC overall FTE decreasing	Institutional Research
HC average annual FTE	*836*	*804*	746	657	659	687	-12%		Institutional Research
Entering cohort	*10*	*7*	13	6	15	11	15%	Fall 2017 to fall 2021	Institutional Research
Retention rate	*70%*	*71%*	85%	83%	87%	85%	2%	Fall 2017 to fall 2021 cohorts Fall to fall retention	Institutional Research
HC overall retention rate	*55%*	*58%*	65%	54%	52%	57%	-13%	Fall 2017 to fall 2021 cohorts Fall to fall retention	Institutional Research
Difference program vs HC overall retention rate	*15%*	*14%*	20%	29%	35%	28%	15%	Program retention rate is significantly higher than HC overall retention rate	
Credential course completion rate	*96%*	*94%*	94%	99%	96%	96%	2%		Institutional Research
HC overall course completion rate	*84%*	*84%*	82%	87%	83%	84%	2%		Institutional Research
Difference credential vs HC overall course completion rate rate	*13%*	*10%*	**12%**	**12%**	**13%**			Credential course completion rate is slightly higher than HC overall course completion rate	

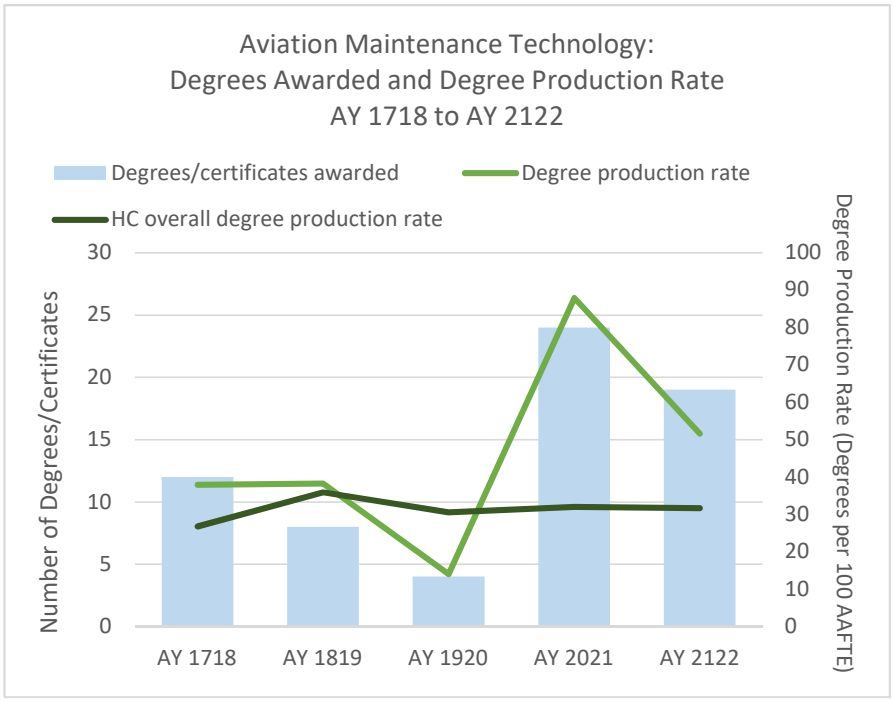
Program Review Data Summary - Aviation Maintenance Technology									AY 2018-19 to AY 2021-22
Student Participation and Success									Completed 10/18/2022
Metric	*AY 1718*	*AY 1819*	**AY 1920**	**AY 2021**	**AY 2122**	**3-Year Avg**	**% Change 3-Years**	**Notes**	**Source**
Degrees/certificates awarded	*12*	*8*	4	24	19	16	375%		Institutional Research
Degree production rate	*38*	*38*	14.0	87.9	51.6	51.2	268%	Number of degrees awarded per 100 AAFTE in program	Institutional Research
HC overall degree production rate	*27*	*36*	30.6	32.0	31.7	31.4	4%	Number of degrees awarded (unduplicated) for 100 AAFTE	Institutional Research
150% graduation rate	*80%*	*50%*	80%	70%	71%	74%	-11%	Fall 2014 to Fall 2018 cohorts	Institutional Research
HC overall 150% graduation rate	*27%*	*26%*	28%	32%	34%	31%	21%		Institutional Research
Difference program vs. HC overall 150% graduation rate	*53%*	*24%*	52%	38%	37%	42%	-29%	Program graduation rate is consistently higher than HC rate, though the gap is closing	
Exam pass rate - AMA	80%	100%	100%	100%	100%	100%	0%	CY 18 to Q2 2022	FAA
Exam pass rate - AMP	80%	100%	100%	N/A	100%	100%	0%	CY 18 to Q2 2023	FAA
Exam pass rate - AMG	100%	100%	N/A	75%	100%	88%	N/A	CY 18 to Q2 2024	FAA
Transfer rate								*N/A for this program*	

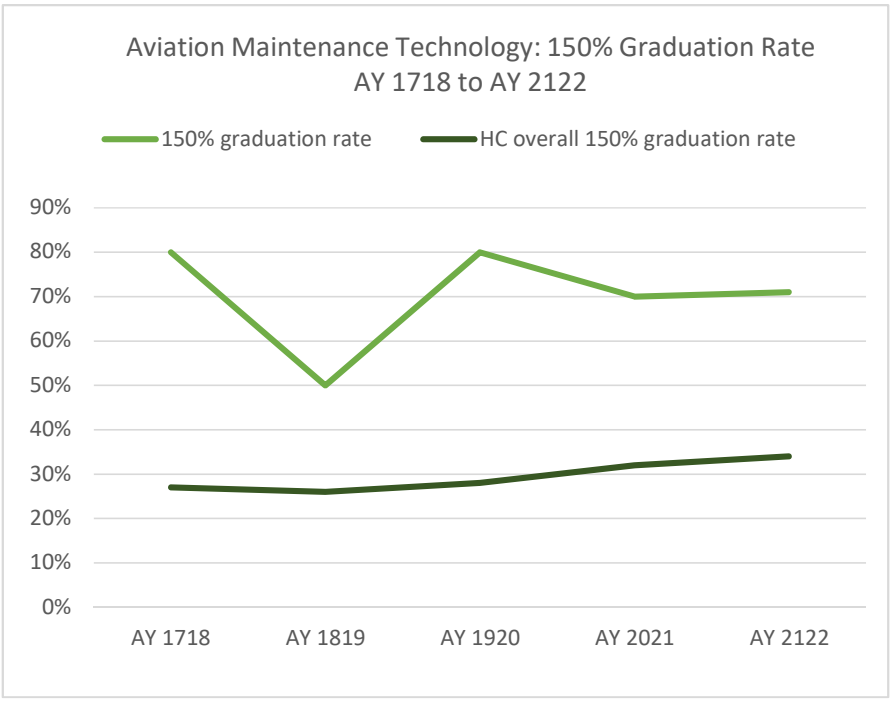

Aviation Maintenance Technology: Program Enrollment
AY 1718 to AY 2122
Program Capacity (Annual): 40
Unduplicated annual enrollment
Average annual FTE
Percent program capacity
Number of Students
% Capacity
0
5
10
15
20
25
30
35
40
0%
10%
20%
30%
40%
50%
60%
70%
80%
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122


Helena College Enrollment
AY 1718 to AY 2122
HC unduplicated annual enrollment
HC average annual FTE
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122


Aviation Maintenance Technology: Retention
AY 1718 to AY 2122
Entering cohort
Retention rate
HC overall retention rate
Number of Students
Retention Rate
0
2
4
6
8
10
12
14
16
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122

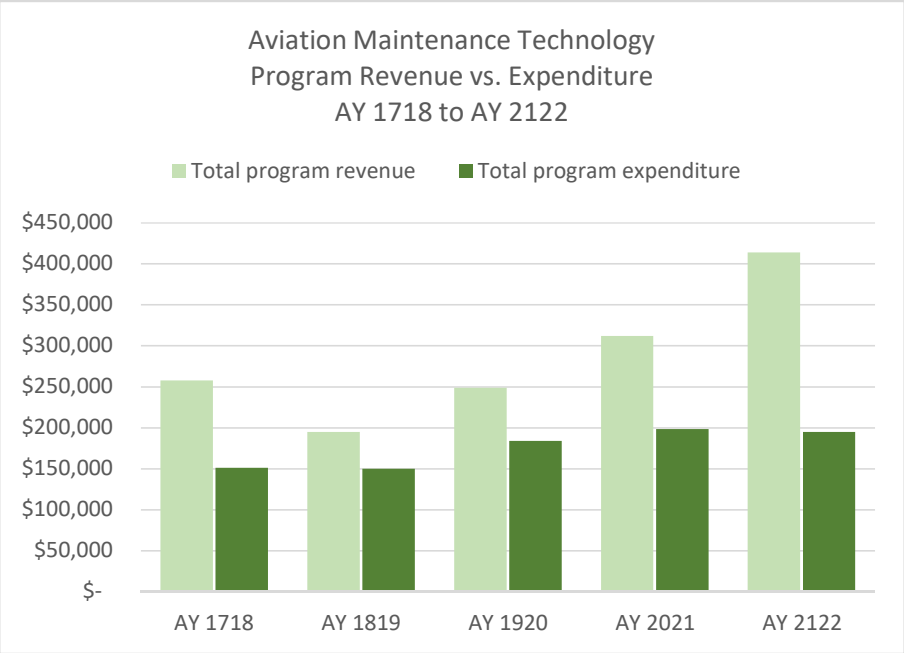

Aviation Maintenance Technology:
Course Completion Rate
AY 1718 to AY 2122
Credential course completion rate
HC overall course completion rate
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122

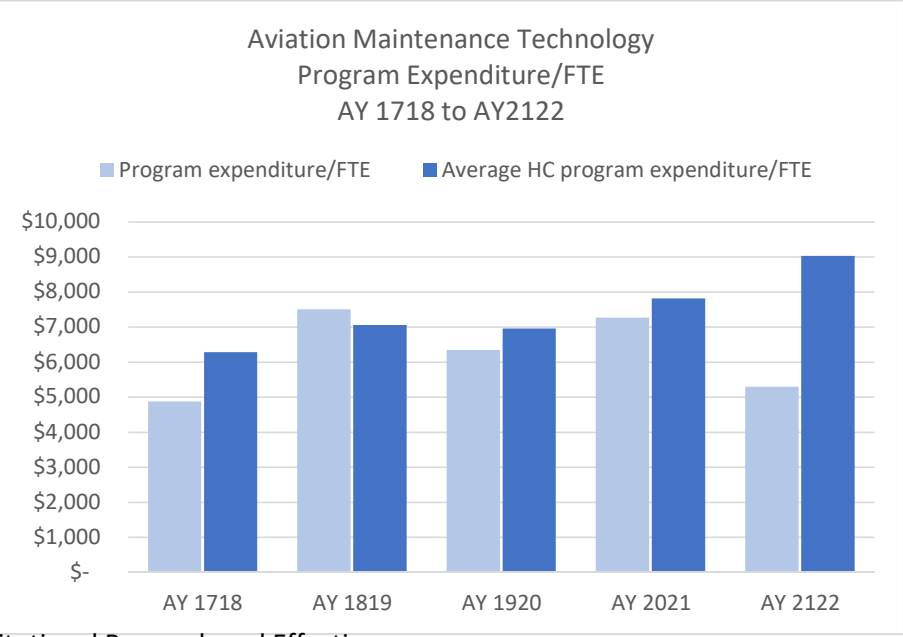

Aviation Maintenance Technology:
Degrees Awarded and Degree Production Rate
AY 1718 to AY 2122
Degrees/certificates awarded
Degree production rate
HC overall degree production rate
Number of Degrees/Certificates
Degree Production Rate (Degrees per 100 AAFTE)
0
5
10
15
20
25
30
0
10
20
30
40
50
60
70
80
90
100
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122

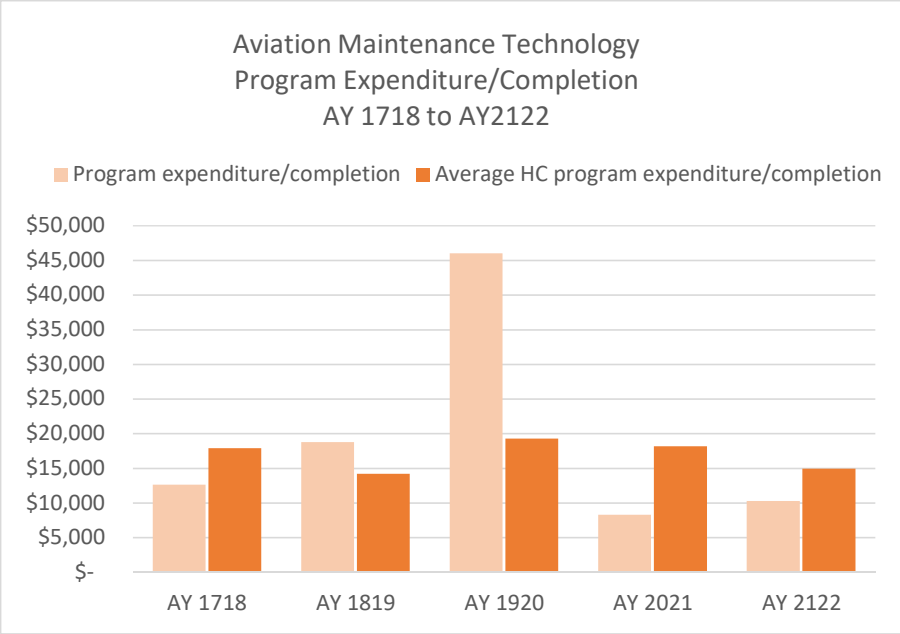

Aviation Maintenance Technology: 150% Graduation Rate
AY 1718 to AY 2122
150% graduation rate
HC overall 150% graduation rate
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122

Program Review Data Summary - Aviation Maintenance Technology									19 to AY 2021-22
Fiscal Resources									Completed 10/18/2022
Metric	*AY 1718*	*AY 1819*	**AY 1920**	**AY 2021**	**AY 2122**	**3-Year Avg**	**% Change 3 Years**	**Program Notes**	**Source**
Total program revenue	*$ 257,685*	*$ 194,685*	$ 248,641	$ 312,030	$ 413,899	$ 324,857	66%		Institutional Research/Finance
Overall HC revenue/FTE	*$ 9,736*	*$ 9,730*	$ 10,383	$ 11,430	$ 11,245	$ 11,019	8%		Institutional Research/Finance
Total program expenditure	*$ 151,225*	*$ 150,022*	$ 183,966	$ 198,372	$ 194,766	$ 192,368	6%		Institutional Research/Finance
Program expenditure/FTE	*$ 4,878*	*$ 7,501*	$ 6,344	$ 7,266	$ 5,291	$ 6,300	-17%		Institutional Research/Finance
Average HC program expenditure/FTE	*$ 6,284*	*$ 7,057*	$ 6,956	$ 7,812	$ 9,031	$ 7,933	30%		Institutional Research/Finance
Difference AVMT vs HC average expenditure/FTE	*-22%*	*6%*	-9%	-7%	-41%	-19%	371%	Program expense per FTE is often less than average of all HC programs	
Program expenditure/completion	*$ 12,602*	*$ 18,753*	$ 45,992	$ 8,266	$ 10,251	$ 21,503	-78%		Institutional Research/Finance
Average HC program expenditure/completion	*$ 17,867*	*$ 14,198*	$ 19,255	$ 18,180	$ 14,942	$ 17,459	-22%		Institutional Research/Finance
Difference AVMT vs HC average program expenditure/completion	*-29%*	*32%*	139%	-55%	-31%	18%	-123%	Program expense per completion has often been less than average of all HC programs, though low program completion numbers in AY1920 significantly influences rate	Institutional Research/Finance

Completed 10/18/2022


Aviation Maintenance Technology
Program Revenue vs. Expenditure
AY 1718 to AY 2122
Total program revenue
Total program expenditure
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$-
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122


Aviation Maintenance Technology
Program Expenditure/FTE
AY 1718 to AY2122
Program expenditure/FTE
Average HC program expenditure/FTE
$10,000
$9,000
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$-
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122


Aviation Maintenance Technology
Program Expenditure/Completion
AY 1718 to AY2122
Program expenditure/completion
Average HC program expenditure/completion
$50,000
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$-
AY 1718
AY 1819
AY 1920
AY 2021
AY 2122

Program Data Summary - Aviation Maintenance Technology					AY 2018-19 to AY 2021-22
Definitions					Completed 10/18/2022
Term	**Abbreviation**	**Use**	**Defintion**	**Source**	**Date added/u**	**Used in Report**
150% graduation rate		Standard	Percentage of students graduating within 150% of normal time to completion for the degree.		10/19/2022	Program Data Summary
Academic Year	**AY**	Standard	Summer, fall, and spring terms (e.g. AY 2020-21 includes summer 2020, fall 2020, and spring 2021)	MUS Enrollment Reporting Procedures		Program Data Summary
Annual average full-time equivalent	**AAFFTE**	Standard	Calculated in the following way: (Fall Official FTE + Summer Official FTE + Spring Official FTE)/2. See also **Full-time equivalent.**	MUS Enrollment Reporting Procedures	3/17/2022	Annual Enrollment History Completion and Transfer History Program Data Summary
Calendar Year	**CY**	Standard	One year from January to December		10/19/2022	Program Data Summary
Cohort		Standard/IPEDS	A specific group of students established for tracking purposes.	IPEDS Glossary	3/17/2022	Course Completion History Completion and Transfer History Retention History Program Data Summary
Course completion		Standard	Percent of students earning a passing grade in a course. May also be counted as credit hours. Does not include incompletes, audits, or missing grades		3/17/2022	Course Completion History Developmental & Gateway Completion History Program Data Summary
Credential course completion rate		Standard	Percent of students earning a passing grade in a course required for a credential. Incompletes, audits, and missing grades are not included.		10/19/2022	Program Data Summary
Degree production per 100 AAFTE		Standard	Number of degrees awarded in an academic year divided by the AAFTE for the same year, multiplied by 100. Allows for longitudunial comparison of degrees awarded while taking into account changes in enrollmentf. Also called "degree production rate"		3/17/2022	Completion and Transfer History Program Data Summary
Degree production rate		Standard	Number of degrees awarded in an academic year divided by the AAFTE for the same year, multiplied by 100. Allows for longitudunial comparison of degrees awarded while taking into account changes in enrollment. Also called "degree production per 100 AAFTE."		10/19/2022	Program Data Summary

Entering cohort		HC	All new **first-time**, transfer in, and readmit/returning students coming to Helena College for the first time, usually in a fall semester.		10/19/2022	Program Data Summary
Expenditure/ Completion		HC	Program expenses (personnel, operating, and adjunct salaries) divided by number of degrees awarded for the academic year		10/19/2022	Program Data Summary
Expenditure/FTE		HC	Program expenses (personnel, operating, and adjunct salaries) divided by FTE for the academic year		10/19/2022	Program Data Summary
Fiscal Year	**FY**	Standard	One year as defined for financial reporting, from July 1 to June 3		10/19/2022	Program Data Summary
Full-time equivalent	**FTE**	Standard	Calculated for a term by dividing total credit hours earned at the end of term (**EOT**) by 15.	MUS Enrollment Reporting Procedures	3/17/2022	Annual Enrollment History Completion and Transfer History Enrollment History Program Data Summary
Headcount		Standard	Count of unique students. See also **Unduplicated**		3/22/2022	Annual Enrollment History Enrollment History Program Data Summary
Job placement rate		MUS, HC	Percent of graduates employed in-state for at least 1 quarter following graduation	Montana University System Workforce Development Dashboard	10/19/2022	Program Data Summary
Montana University System	**MUS**		Comprised of sixteen public universities and colleges in the state of Montana, including Helena College. Administered by the Office of the Commissioner of Higher Education and Governed by the Board of Regents	MUS website	4/15/2022	Annual Enrollment History Retention History Developmental & Gateway Completion History
Percent program capacity		Standard	Calculation = (Unduplicated Annual Enrollment) / (**Program Capacity**)		10/19/2022	Program Data Summary
Program capacity		Standard	Maximum number of students a program can accommodate in one academic year (first year maximum + second year maximum)	Program records	10/19/2022	Program Data Summary
Retention		Standard	Precentage of fall entering cohort returning for either the subsequent spring or subsequent fall semseter		4/1/2022	Retention History Program Data Summary
Unduplicated		Standard	Each student is counted only once (count of unique students)		3/17/2022	Annual Enrollment History Completion and Transfer History Program Data Summary

The University of Montana
Multi-Year Comparison of Operating Accounts
H60390

Fund: 431108 Aviaton Program Fee

Orgn: 443805 Aviaton Program Fee

Account Type Levels / Accounts			2020	2021	2022
50 Revenue					
51 Tuition and Fees					
	50010	Class Fees, Other	2,764	3,069	5,134
		Tuition and Fees:	**2,764**	**3,069**	**5,134**
		Revenue:	**2,764**	**3,069**	**5,134**
70 Operating and Capital					
72 Supplies					
	62204	Educational Supplies	0	0	5,406
	62299	General Supplies	0	0	0
		Supplies:	**0**	**0**	**5,406**
		Operating and Capital:	**0**	**0**	**5,406**
Orgn 443805 Total:		Income (Credits)	**$2,764**	**$3,069**	**$5,134**
		Expenses (Debits)	**$0**	**$0**	**$5,406**

Criteria: COAS_CODE = 'C' and ((FUND_CODE = '431108' AND ORGN_CODE = '443805' AND PROG_CODE = '01')) and FSYR_CODE in ('22','21','20') and FSPD_CODE ='14'

The University of Montana
Multi-Year Comparison of Operating Accounts
H60390

Fund: 431108 Aviaton Program Fee

Orgn: 443805 Aviaton Program Fee

Account Type Levels / Accounts		2020	2021	2022
Fund 431108 Total:	Income (Credits)	**$2,764**	**$3,069**	**$5,134**
	Expenses (Debits)	**$0**	**$0**	**$5,406**

Criteria: COAS_CODE = 'C' and ((FUND_CODE = '431108' AND ORGN_CODE = '443805' AND PROG_CODE = '01')) and FSYR_CODE in ('22','21','20') and FSPD_CODE ='14'

The University of Montana
Multi-Year Comparison of Operating Accounts

Account Type Levels / Accounts		2020	2021	2022
Grand Total:	Income (Credits)	**$2,764**	**$3,069**	**$5,134**
	Expenses (Debits)	**$0**	**$0**	**$5,406**

The University of Montana
Multi-Year Comparison of Operating Accounts
H05020

Fund: 411000 General Operating

Orgn: 443202 Aviation

Account Type Levels / Accounts			2020	2021	2022
50	**Revenue**				
	59	**Gifts**			
		50151 Private Gifts & Donations	840	0	0
		Gifts:	**840**	**0**	**0**
		Revenue:	**840**	**0**	**0**
60	**Personal Services**				
	61	**Salaries and Wages**			
		61123 Contract Faculty	104,371	102,646	112,211
		Salaries and Wages:	**104,371**	**102,646**	**112,211**
	64	**Employee Benefits**			
		61401 FICA	5,914	5,324	7,147
		61402 Retirement	0	0	0
		61403 Group Insurance	25,296	25,296	25,296
		61404 Workers Compensation	355	371	217
		61409 Medicare Tax	1,383	1,245	1,493
		61410 State Unemployment Tax	276	227	389
		61415 TIAA-CREF Retirement	10,074	8,510	11,303
		61415A TIAA-CREF 1% HB95	1,043	979	1,119
		61499 Benefits-General	0	0	0
		Employee Benefits:	**44,340**	**41,951**	**46,963**
		Personal Services:	**148,711**	**144,598**	**159,175**
70	**Operating and Capital**				
	71	**Other Services**			
		62191 Printing	76	0	0
		Other Services:	**76**	**0**	**0**
	72	**Supplies**			
		62203 Clothing & Personal Supplies	0	134	80
		62204 Educational Supplies	16,364	16,817	13,460
		62210 Minor Equipment	2,486	3,207	850
		62216 Gasoline	131	399	181
		62224 Maps Charts & Pamphlets	0	0	108
		62225 Books & Reference Materials	174	0	44
		62227 Building & Grounds Materials	0	0	463
		62229 Shop Supplies & Tools	228	2,932	1,746
		62241 Office Supplies	8	25	15
		62250 Pro-Card	0	0	0

Criteria: COAS_CODE = 'C' and ((FUND_CODE = '411000' AND ORGN_CODE = '443202' AND PROG_CODE = '01')) and FSYR_CODE in ('22','21','20') and FSPD_CODE ='14'

The University of Montana
Multi-Year Comparison of Operating Accounts
H05020

Fund: 411000 General Operating
Orgn: 443202 Aviation

Account Type Levels / Accounts			2020	2021	2022
70	**Operating and Capital**				
72	**Supplies**				
	62299	General Supplies	0	0	0
		Supplies:	**19,391**	**23,513**	**16,947**
74	**Travel**				
	62401	In State Personal Car Mileage	0	0	-765
	62405	In State Other	0	36	0
	62407	In State Meals-Non Overnight	0	15	0
	62417	Out of State Meals	0	0	79
	62499	Travel-General	0	0	0
		Travel:	**0**	**51**	**-685**
75	**Rent**				
	62515	Gas Cylinders-Rent	292	171	101
	62599	Rent-General	0	0	0
		Rent:	**292**	**171**	**101**
77	**Repair & Maintenance**				
	62720	Batteries	0	252	622
	62745	Educational Equipment	452	710	24
	62799	Repairs & Maintenance-General	0	0	0
		Repair & Maintenance:	**452**	**962**	**646**
78	**Other Expenses**				
	62801	Dues	600	353	0
	62802	Subscriptions	1,696	949	1,844
	62809	Education Training Costs	0	1,215	0
	62817	Meetings & Conference Costs	0	0	0
	62899	Other Expenses-General	0	0	0
		Other Expenses:	**2,296**	**2,517**	**1,844**
7D	**Capital Equipment**				
	63107	Educational & Recreational	0	0	0
	63199	Equipment-General	0	0	0
		Capital Equipment:	**0**	**0**	**0**
		Operating and Capital:	**22,506**	**27,213**	**18,853**
Orgn 443202 Total:		Income (Credits)	**$840**	**$0**	**$0**
		Expenses (Debits)	**$171,217**	**$171,811**	**$178,027**

Criteria: COAS_CODE = 'C' and ((FUND_CODE = '411000' AND ORGN_CODE = '443202' AND PROG_CODE = '01')) and FSYR_CODE in ('22','21','20') and FSPD_CODE ='14'

The University of Montana
Multi-Year Comparison of Operating Accounts
H05020

Fund: 411000 General Operating

Orgn: 443202 Aviation

Account Type Levels / Accounts		2020	2021	2022
Fund 411000 Total:	Income (Credits)	**$840**	**$0**	**$0**
	Expenses (Debits)	**$171,217**	**$171,811**	**$178,027**

Criteria: COAS_CODE = 'C' and ((FUND_CODE = '411000' AND ORGN_CODE = '443202' AND PROG_CODE = '01')) and FSYR_CODE in ('22','21','20') and FSPD_CODE ='14'

The University of Montana
Multi-Year Comparison of Operating Accounts

Account Type Levels / Accounts		2020	2021	2022
Grand Total:	Income (Credits)	**$840**	**$0**	**$0**
	Expenses (Debits)	**$171,217**	**$171,811**	**$178,027**