

**Major/Program of Study Assessment Report  
Rocky Mountain College (updated 2025)**

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**Major/Minor/Program of Study:** Aeronautical Science

**Academic Year:** 2024-2025

**Date Submitted:** May 2, 2025

**Contact person:** Dan Hargrove, Director of Aviation

**Note:** All rubrics are based on 4 point scale. See document “Rubric for Major/Program of Study Assessment Report”  
1-6 are AABI CORE Outcomes.  
7-17 are AABI General Outcomes  
18 is AABI Program Criteria  
19 is other criteria.

Sample sizes

All data is gathered from students only in the aeronautical science major, except AVS 405 and AVS 308.

Senior Exit survey: 23

AVS 405: 31 (not separated by major because of teams)

Internship eval: 18

CRM LOFT: 20

AVS 400 interview and ethics paper: 24

AVS 312 Aviation Law: 41

AVS 308 Safety: 41 (not separated by major because of teams)

Student Learning Outcome	Evaluation Methods/Tools (include course number)	Performance Standard	Assessment Results (include sample size and averages)	Recommendations: Intended Use of Results
1. Graduates will demonstrate attributes of an aviation professional, career planning and understanding of certification.	Feedback from “outsider” aviation professional conducting mock interviews of seniors in AVS 400 course, a capstone course.	3.0 score on AVS 400 interview (rubric)	3.3 on interview	Feedback from graduates and exit survey remains strong. This is in our mission statement and certainly one of the greatest strengths of the program. We must

	<p>Internship supervisor eval</p> <p>Senior exit survey</p> <p>Informal feedback from graduates</p>	<p>3.0 score on internship eval</p> <p>3.0 score on exit survey</p> <p>Overall positive</p>	<p>3.5 on internship eval</p> <p>4.0 on exit survey 3.5 on exit survey for career planning</p> <p>Overall very positive</p>	<p>continue to provide individual feedback to students in this area. Internship assess is down a little, but all other areas are up. “Professionalism” was #1 strongest response on exit survey. Encourage all employees to explicitly talk about this whenever possible.</p>
<p>2. Graduates will demonstrate understanding of aircraft design, performance, operating characteristics and maintenance.</p>	<p>Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.</p> <p>Internship supervisor eval</p> <p>Senior exit survey</p>	<p>3.0 score on topic from LOFT instructor (rubric)</p> <p>3.0 on internship eval</p> <p>3.0 score exit survey</p>	<p>3.6 CRM LOFT</p> <p>3.5 on internship eval</p> <p>3.7 on exit survey</p>	<p>CRM LOFT assessment up slightly. Exit survey and internships down slightly. AVS 410 is likely the key to this outcome. For manpower reasons, we did not offer AVS 410 two years in a row. The norm is every other year and that is what we will likely stick with due to increase in number of students. We anticipate increase in score next year after AVS 410 is offered spring 2026. It is not required, but most students take it.</p>

3. Graduates will demonstrate understanding of aviation operations in terms of aviation safety and human factors.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.  Internship supervisor eval  Senior exit survey	3.0 score on topic from LOFT instructor (rubric)  3.0 on internship eval  3.0 score exit survey	3.5 CRM LOFT  3.6 on internship eval  3.8 on exit survey	Overall assessment remains steady and high. New Director of Safety, Safety Officers, buy in from Flight Ops and Safety Meetings have been strong. SHORT reports are healthy adding to safety culture. Constant vigilance! Safety remains top discussion point for new freshmen, staff meetings, Instructor meetings.
4. Graduates will demonstrate understanding of national and international aviation law, regulations and labor issues.	AVS 312 Aviation Law tests: Exam 1: Q 1,2,3,6,7. Exam 2: Q 1,5. Exam 3: Q1,2,5,9. Exam 4: Q1,2,9,11.  Internship supervisor eval  Senior exit survey	75% average on questions on AVS 312 exams. Scaled to 3.0 from professor.  3.0 on internship eval  3.0 score exit survey	AVS 312 Exams: 3.5  3.5 on internship eval  3.3 on exit survey	Second year AVS 312 professor has been a great addition. Seniors did not take AVS 312 from new professor—we expect higher marks next year. The course continues to evolve, including more recent case studies and current events.
5. Graduates will demonstrate understanding of design and operations of airports, airspace, and the air traffic control system.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.  Internship supervisor eval  Senior exit survey	3.0 score on topic from LOFT instructor (rubric)  3.0 on internship eval  3.0 score exit survey	3.5 CRM LOFT  3.6 on internship eval  3.9 on exit survey	Scores are strong and steady. Professor in AVS 203 ATC will retire soon, so this coming year efforts to replace him will be key. This is challenging because of FAA rule not allowing active controllers to teach. This was off year for AVS 310, airport planning. More and more students take the course as an elective, which is great.

6. Graduates will demonstrate understanding of meteorology and environmental issues.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.  Internship supervisor eval  Senior exit survey	3.0 score on topic from LOFT instructor (rubric)  3.0 on internship eval  3.0 score exit survey	3.5 CRM LOFT  3.6 on internship eval  3.8 on exit survey	Seasoned professor continues teaching AVS 150. Program growth might require one section of this course, rather than the current two. Changes to syllabus and format might be necessary if that happens next year. Ground school practical application needs to be emphasized.
7. Graduates will apply mathematics, science, and applied sciences to aviation related disciplines.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.  Internship supervisor eval  Senior exit survey	3.0 score on topic from LOFT instructor (rubric)  3.0 on internship eval  3.0 score exit survey	3.7 CRM LOFT  3.6 on internship eval  3.6 on exit survey	Internship surveys are strong, which is likely the best way to measure this outcome since it is “real world.” Two of four full time professors are engineers, which helps this area.
8. Graduates will analyze and interpret data.	AVS 405 Air Transportation Management airline simulation evaluation  Internship supervisor eval  Senior exit survey	3.0 score AVS 405 evaluation tool (rubric)  3.0 on internship eval  3.0 score exit survey	3.77 AVS 405 eval  3.6 on internship eval  3.7 on exit survey	AVS 405 evaluation is up. AVS 410 Advanced Aero will not be offered every year. AVS 101 class size needs to be kept reasonable small since data analysis in this course is new to most students.
9. Graduates will work effectively on multi-disciplinary and diverse teams.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.  AVS 405 Air Transportation	3.0 score on topic from LOFT instructor (rubric)  3.0 score AVS 405 evaluation tool	3.6 CRM LOFT  3.32 AVS 405 eval	CRM is steady, which is good because it is the closest we have to “real world” team work on a crew. Definition of “diverse” has been better defined for students which

	Management airline simulation evaluation	(rubric)		will give more standardized feedback.
	Internship supervisor eval	3.0 on internship eval	3.4 on internship eval	
	Senior exit survey	3.0 score exit survey	3.6 on exit survey	
10. Graduates will make professional and ethical decisions.	Ethics paper, AVS 400	3.0 on ethics paper	3.7 on ethics paper	Strong. No change. Ethics was tied for #2 positive response on senior exit survey. Continue clear discussions in AVS 100 and AVS 400. Continue holding high standards for academic dishonesty and policies relates to changes in AI, etc.
	Internship supervisor eval	3.0 on internship eval	3.7 on internship eval	
	Senior exit survey	3.0 score exit survey	3.9 on exit survey	
11. Graduates will communicate effectively, using both written and oral communication skills.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.	WRITTEN:	WRITTEN:	AVS 405 final report assessment remains 4.0. Continue to emphasize across curriculum.
	AVS 405 Air Transportation Management airline simulation evaluation	3.0 score AVS 405 evaluation tool (rubric)	4.0 AVS 405 eval	Oral communication in CRM is improved, which is probably our most important assessment tool since that is what they will do after graduation—for a career. We must continue to emphasize this type of oral communication. Formal briefing skills in AVS 308 are steady from last year. Larger classes have required some changes to formal presentations. We have done
	Internship supervisor eval	3.0 on internship eval	3.4 on internship eval	
	Senior exit survey	3.0 score exit survey	3.8 on exit survey	
	Oral presentation AVS 308	ORAL:	ORAL:	
		3.0 score on topic from LOFT instructor (rubric)	3.5 CRM LOFT	
		3.0 on internship eval	3.7 on internship eval oral	
		3.0 score exit survey	3.8 on exit survey	
			3.3 AVS 308 presentation	

		3.0 on AVS 308 presentation		more podcast format, which seems to be working well.
12. Graduates will engage in and recognize the need for life-long learning.	<p>Internship supervisor eval</p> <p>Senior exit survey</p>	<p>3.0 on internship eval</p> <p>3.0 score exit survey</p>	<p>3.5 on internship eval</p> <p>3.9 on exit survey</p>	<p>Internship feedback is down slightly. This is probably the most important assessment tool because it is away from the classroom. Graduates evaluation of themselves is strong. Continue to emphasize the liberal arts—the foundation of the entire aviation program.</p>
13. Graduates will assess contemporary issues.	<p>AVS 312 Aviation Law short answer tests and Socratic instruction—direct questioning.</p> <p>AVS 308 test questions on contemporary issues—Boeing 737 door plug blowout.</p> <p>Senior exit survey</p>	<p>75% average on questions on AVS 312 exams. Scaled to 3.0 from professor.</p> <p>75% on questions on AVS 308 exams.</p> <p>3.0 score exit survey</p>	<p>AVS 312 Exams and questioning: 4.0</p> <p>AVS 308 exams: 84% (3.5)</p> <p>3.5 on exit survey</p>	<p>A significant change to this assessment has been to include AVS 308 Aviation Safety as a tool for including contemporary issues. Perfect fit for this outcome and course material and critical thinking.</p> <p>New AVS 312 professor has been a great addition. We'll need a couple of years of data to see trends but real world issues have been a significant part of this course.</p>

<p>14. Graduates will use the techniques, skills, and modern technology necessary for professional practice.</p>	<p>Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.</p> <p>AVS 405 Air Transportation Management airline simulation evaluation</p> <p>Internship supervisor eval</p> <p>Senior exit survey</p>	<p>3.0 score on topic from LOFT instructor (rubric)</p> <p>3.0 score AVS 405 evaluation tool (rubric)</p> <p>3.0 on internship eval</p> <p>3.0 score exit survey</p>	<p>3.5 CRM LOFT</p> <p>3.44 AVS 405 eval</p> <p>3.6 on internship eval</p> <p>3.6 on exit survey</p>	<p>Strong, and AVS 405 is up significant after one down year. except AVS 405 is down significantly. Professor uses the student's Initial Business Strategy grade as the artifact for this outcome. It is improved. More students are taking AVS 447 and AVS 449 for whatever reason, but these courses teach aircraft sytems like they will learn them in the industry. New G3X glass cockpit sim should positively impact this area. down the score. These teams didn't submit complete IBS's, and were missing sections. Monitor for next year. Many students take AVS 447 and AVS 449 which are computer based advanced aircraft systems courses. AVS 325 Advanced Flight Systems (elective course) is very well attended, continues to grow. 15 last year, 17 this year, 20 next year.</p>
<p>15. Graduates will assess the national and international aviation environment.</p>	<p>AVS 312 Aviation Law exams chapters: 1,2,3,4,8,9,15.</p> <p>Senior exit survey</p>	<p>75% average AVS 312 exams.</p> <p>3.0 score exit survey</p>	<p>AVS 312 Exams: 3.5</p> <p>3.6 on exit survey</p>	<p>New AVS 312 professor has been a great addition. We'll need a couple of years of data to see trends. Score this year is down, but that could be from change in professor.</p>

16. Graduates will apply pertinent knowledge in identifying and solving problems.	<p>Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.</p> <p>AVS 405 Air Transportation Management airline simulation evaluation Senior exit survey</p> <p>Internship supervisor eval</p> <p>Senior exit survey</p>	<p>3.0 score on topic from LOFT instructor (rubric)</p> <p>3.0 score AVS 405 evaluation tool (rubric)</p> <p>3.0 on internship eval</p> <p>3.0 score exit survey</p>	<p>3.4 CRM LOFT</p> <p>3.91 AVS 405 eval</p> <p>3.5 on internship eval</p> <p>3.8 on exit survey</p>	Results are steady in all areas assessed. No change necessary. Internship feedback is most important, and is solid.
17. Graduates will apply knowledge of business sustainability to aviation issues.	<p>AVS 405 Air Transportation Management airline simulation evaluation</p> <p>Internship supervisor eval</p> <p>Senior exit survey</p>	<p>3.0 score AVS 405 evaluation tool (rubric)</p> <p>3.0 on internship eval</p> <p>3.0 score exit survey</p>	<p>3.89 AVS 405 eval</p> <p>3.7 on internship eval</p> <p>3.5 on exit survey</p>	Solid increase in AVS 405 which is most relevant tool for assessment. Enrollment by pilots in elective course AVS 307 FBO Ops is up. Continue to advise students to this course and be aware of scheduling conflicts since the course is elective. .
18. Graduates will meet FAA commercial pilot standards, with instrument and multi-engine ratings and demonstrate the ability to operate in a crew environment.	<p>Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.</p> <p>Check ride pass rates.</p> <p>FAA written exam pass rates.</p>	<p>3.0 score on topic from LOFT instructor (rubric)</p> <p>85% pass rate, all syllabi</p> <p>85% written test pass rate</p>	<p>3.6 CRM LOFT</p> <p>100% of graduating seniors have passed all 4 required check rides. Private: 88% Instrument: 84% Commercial: 71% Multi Engine: 93%</p> <p>Written Test Pass Rate:</p>	Pass rates for private and multi are nearly identical to last year. Instrument is up from 61% and commercial is down from 81%. Flight Ops has done more in CFII training and hiring expectations. We will continue to have a mixed fleet of glass cockpit and round dial aircraft, which could hamper



	Senior exit survey	3.0 score exit survey	Private: 100% Instrument: 100% Commercial: 100%  3.8 on exit survey	instrument training, but we are looking forward to increased sim us with new sim deliver.
19. Graduates will demonstrate knowledge and application of aerodynamic principles.	Score from LOFT flights in AVS 404 CRM conducted by former airline pilot.  Senior exit survey	3.0 score on topic from LOFT instructor (rubric)  3.0 score exit survey	    3.7 on exit survey	AVS 410 Advanced Aero, an elective, will not be offered two years in a row. Demand remains strong. Continue to emphasize in advising.

Evaluation metrics:

1. Please include a copy of any rubric(s) that were used to evaluate student data
2. Please provide rationale for the performance standard/benchmark stated above.

In terms of the achievement of student learning outcomes:

1. What are your program's principal strengths?

The new professor hired summer 2023 has been a great addition. He brings deep expertise to the classroom based on his aeronautical engineering knowledge and he has brought industry standards and ideas to the safety program. Manpower and leadership over the safety program are stable and strong.

Areas if particular strength include professionalism and safety. We document informal feedback from graduates, which is very strong in the area of career preparation and professionalism.

Recruiting is particularly strong, with more students coming to RMC for flight training than we have room for. Our process for selectively giving flight slots has been in place for about five years, but now is being testing and it appears to be solid and fair.

We purchased two new Piper aircraft that we delivered December 2024. We also purchased a new Flight Training Device (“simulator”) that will be delivered August 2025. The College has been very supportive of new equipment needs and continues to set aside money for future aircraft purchases. Enrollment is at capacity and new aircraft will help us recruit and retain as many students as possible, which of course is good for the college as a whole. The Aviation Program again is the largest academic program at RMC in terms of numbers of total students enrolled and number of incoming freshmen.

Our best asset is the relationship between the Aviation Program and RMC in general. We must continue to market the well-rounded education and the Core, both based in the liberal arts. Our key focus needs to remain the opportunity our students have to be both well prepared for strong careers and get a strong liberal arts-based education. The most unique and most important draw to our program is the college itself.

**Strengths looking forward:** The graduating class is somewhat small this year, in large part due to lack of recruiting during Covid. That has caused class sizes to not be similar, which has been challenging to balance out. We are more carefully admitting students for fall 2025 which will help in this area immediately.

We continue to have strong relationships with industry through airline bridge programs and recruiting from other companies. Also, our more diverse Industry Advisory Committee and been helpful.

The Safety Program is a tremendous strength for the overall Aviation Program. In addition to making our operations safer on a day-to-day basis, it develops all of our students, including aviation management majors, as aviation professionals and truly develops them for their careers.

## 2. How might you help assure that those strengths are maintained?

Continue hiring the right people who fit our professional culture. The Director of Flight Operations is retiring July 2025. We hired our Chief Flight Instructor to that role, which creates an opening in the Chief Flight Instructor position. This will be very challenging to fill at the level of quality we have enjoyed. Since last year we have hired a new Assistant Chief Pilot which is working out very well.

We do not expect to grow the program any more. We do expect to continue to be one of the largest, if not the largest, academic programs on campus which helps the whole campus thrive. The approval of a new major, Uncrewed Aerial Systems, is huge. This provides better recruiting overall, and a great second option besides aviation management for student who will not get a flight slot.

## 3. What are the program’s principal challenges?

### External Environment

Hiring a qualified Chief Flight Instructor will be a challenge because of the high pay of the industry.

CFI turn-over is always a concern, though again this year we have enough CFI applicants. A smaller senior class this year allowed us to push more students through flight training faster giving us more candidates sooner. CFI manning is healthy now, but we anticipate this could be a problem area eventually. Mentorship of CFI’s is critical. We must continue to get them through CFI training as quickly as possible. Some do leave us

before they have 1000 hours because of Part 135 opportunities but producing CFI's by the end of their junior year is key so they work for us before graduation.

Feedback from graduates continues to tell us our focus on a well-rounded education and the liberal arts and critical thinking are the right areas on which to focus. Overly focusing on one segment of the industry, such as the airlines as is common and many other collegiate aviation programs, is too narrow and risky.

#### Internal Environment

- Students: Continue to practice the process of admitting the highest number of new freshmen while maintaining flight training standards and on-time graduation rates. We are at capacity now and we did limit flight slots for both fall 2024 and spring 2025 semesters.
- Establishment of a fund for future aircraft purchase has allowed us to secure donations that were not available in the past. Two new planes were delivered December 2024.
- Our Women in Aviation, International Chapter is strong and the Military Student Club is alive and well. Likewise, new chapters of American Association of Airport Executives and the Drone Club have been very healthy additions to the program, albeit more focused on non-flying students.

#### 4. What programmatic/curricular changes are planned for addressing these challenges, and what is the implementation timeline?

- The new major in UAS was approved by the faculty and the Board of Trustees. It goes into the catalog for fall 2025.
- Two new aircraft we delivered December 2024 and new sim will be delivered August 2025. We will need to carefully consider when we will sell the three older Piper Archers because of the number of students in the program. This should dampen out by summer 2026.

Some shorter terms plan for improvement include:

#### Flight Operations

- Fleet Replacement Plan has been executed. This is particularly strong. When to sell older Archers remains a question.
- Hire Chief Flight Instructor.

#### Aviation Campus Program

- Hire half-time professor in next two years.

Data in 5 – 10 years:

- Entering class each fall of 60 students, which includes five in the new UAS major.
- Retention of 70% or better between freshmen and sophomore years

- Graduation class of 30 each year in Aeronautical Science, with 10 more in Aviation Management and UAS.
- Maintain enrollment of no more than 15% - 20% of the college
- We are currently the largest academic program on campus. This will likely not be the case in future years as the College grows and the Aeronautical Science major remains at capacity. That major will continue to be our biggest recruiter, by far though we have high expectations for the UAS major and recruiting.

Please indicate where your assessment artifacts are stored:

- ☐ I submit my artifacts to the assessment committee  
☒ I keep hard copy artifacts stored in my office

☒ Other: The Director of Aviation keeps electronic copies of artifacts on his office computer.

Changes to your program's curriculum (optional)

See above. New UAS major.

1. Have you added or revised your learning outcomes since last year's program assessment? If so, please indicate which outcomes have been revised and which outcomes have been added or removed.  
 No.

Have you made changes to the program's mission since last year's assessment? If so, please post the new mission statement here.

A recommendation for the Aviation Accreditation Board International visit in March 2024 is for us to have a unique mission statement for each major. We developed mission statements this past year.

Overall Aviation Program Mission: To educate and train individuals to be professionals and leaders in the aviation industry.

Mission of the Aeronautical Science major:

The mission of the Rocky Mountain College Aeronautical Science major is to develop the next generation of highly qualified professional pilots to serve the aviation industry. Graduates will exhibit professionalism, leadership abilities, critical thinking skills and ethical decision-making.

Mission of the Aviation Management major:

The mission of the Rocky Mountain College Aviation Management major is to develop the next generation of aviation management professionals to serve the aviation industry. Graduates will possess knowledge of the broad range of the aviation industry and exhibit professionalism, leadership abilities, critical thinking skills and ethical decision-making.