Assessment Plan:
Kent State University

Aeronautics Programs

TABLE OF CONTENTS

Contents

MISSION 2

SECTION 1. STUDENTS and STUDENT SUPPORT SERVICES 2

1.1 STUDENT ADMISSIONS 2
1.2 EVALUATING STUDENT PERFORMANCE 3
1.3 TRANSFER STUDENTS AND TRANSFER COURSES 5
1.4 ADVISING AND CAREER GUIDANCE 6
1.5 GRADUATION REQUIREMENTS 7

SECTION 2. PROGRAM EDUCATIONAL GOALS and MISSION STATEMENTS 8

2.1 PROGRAM EDUCATIONAL GOALS 8
2.2 PROGRAM EDUCATIONAL GOALS CONSTITUIENTS and PLAN OF REVIEW 8
2.3 PROGRAM MISSION STATEMENTS 9

SECTION 3. STUDENT LEARNING OUTCOMES 10

3.1 AABI STUDENT LEARNING OUTOMCES 10
3.2 AERONAUTICS PROGRAM STUDENT LEARNING OUTCOMES (SLO'S) 11

Section 4. AERONAUTICS OUTCOMES TO PROGRAM EDUCATIONAL GOALS 13

4.2 RELATIONSHIP OF AABI STUDENT LEARNING OUTCOMES (SLO) to FACULTY DEVELOPED STUDENT LEARNNG OUTCOMES (SLO) BY MAJOR 21
4.3 FACULTY DEVELOPED STUDENT LEARNING OUTCOMES (SLO) RELATIONSHIP TO REQUIRED COURSEWORK BY MAJOR 30
4.4 ASSESSMENT EVIDENCE COLLECTION CHARTS by PROGRAM MAJOR 36

SECTION 5. ASSESSMENT and CONTINUOUS IMPROVEMENT 42

5.1 Student Learning Outcome Assessment and Methods 42
5.2 Course Evidence Assessments and Evaluations 42
5.3 Evaluation of Assessment Results 43
5.4 Aeronautics Student Survey by Program Major 44
5.5 Aeronautics Alumni Survey 44
5.6. Aeronautics Program Review 44

SECTION 6. CURRICULUM 45

6.1 Department Level: 45
6.2 University Level: 45

SECTION 7. FACILITIES AND EQUIPMENT 45

7.1 FACULTY EVALUATION 45
7.2 INSTITUTIONAL SUPPORT AND STRUCTURE 46

SECTION 8. FACILTIES, EQUIPMENT, and SERVICES 46

8.1 OFFICES, CLASSROOMS AND LABORATORIES 46
8.2 LABORATORY SAFETY 47

SECTION 9. AVIATION SAFETY CULTURE AND PROGRAM 48

9.1 SAFETY MANAGEMENT SYSTEM 48
9.2 ASSESSMENT 48

SECTION 10. RELATIONS with INDUSTRY 48

10.1 CAE ADVISORY SUB COUNCIL, AERONAUTICS 48

SECTION 11. AERONAUTIC PROGRAM'S GOALS 49
11.1 STUDENTS and STUDENT SUPPORT SERVICES 49
11.2 PROGRAM MISSION AND EDUCATIONAL GOALS 49
11.3 STUDENT LEARNING OUTCOMES 49
11.4 CURRICULUM 49
11.5 FACULTY AND STAFF 50
11.6 FACILITIES and EQUIPMENT 50
11.7 AVIATION SAFETY CULTURE AND PROGRAM 50
11.8 RELATIONS WITH INDUSTRY 50

Appendix A The Current Table of Organization 58

Appendix B Laboratory Spaces and Equipment 59

TABLES

Table 1 Program Education Goals Plan of Review 8
Table 2: AABI Student Learning Outcomes in Relation to Program Educational Goals 13
Table 3: Aeronautical Studies SLOs in Relation to Program Educational Goals 15
Table 4: Air Traffic and Airspace Management SLOs in Relation to Program Educational Goals 16
Table 5: Aviation Maintenance Management SLOs in Relation to Program Educational Goals 17
Table 6: Aviation Management SLOs in Relation to Program Educational Goals 18
Table 7: Professional Pilot SLOs in Relation to Program Educational Goals 19
Table 8: Unmanned Aircraft Systems Flight Operations SLOs in Relation to Program Educational Goals 20
Table 9: Relationship of AABI SLO's to Aeronautical Studies SLO's 21
Table 10: Relationship of AABI SLO's to Air Traffic and Airspace Management SLO's 22
Table 11: Relationship of AABI SLO's to Aviation Maintenance Management SLO's 24
Table 12: Relationship of AABI SLO's to Aviation Management SLO's 25
Table 13: Relationship of AABI SLO's to Professional Pilot SLO's 27
Table 14: Relationship of AABI SLO's to Unmanned Aircraft System Flight Operations SLO's 28
Table 15: Relationship of Aeronautical Studies SLO to Required Coursework 30
Table 16: Relationship of Air Traffic and Airspace Management SLO to Required Coursework 31
Table 17: Relationship of Aviation Maintenance Management SLO to Required Coursework 32
Table 18: Relationship of Aviation Management SLO to Required Coursework 33
Table 19: Relationship of Professional Pilot SLO to Required Coursework 34
Table 20: Relationship of Unmanned Aircraft System Flight Operations SLO to Required Coursework 35
Table 21: Aeronautical Studies Evidence Collection Chart 36
Table 22: Air Traffic and Airspace Management Evidence Collection Chart 37
Table 23: Aviation Maintenance Management Evidence Collection Chart 38
Table 24: Aviation Management Evidence Collection Chart 39
Table 25: Professional Pilot Evidence Collection Chart 40
Table 26: Unmanned Aircraft System Flight Operations Evidence Collection Chart 41
Table 27:Student Learning Outcome Assessment Cycle 42
Table 28:Assessment Accountability Chart 43
Table 29:Program Review Schedule 44
Table 30: Master Assessment List 54

Assessment Plan –

INTRODUCTION

This assessment plan is written and implemented by the Faculty of the Aeronautics Programs. Components in this plan are in place to satisfy the requirements of the Aviation Accreditation Board International (AABI), Kent State University's College of Aeronautics and Engineering (CAE), and to assure the continued success of the graduates of the aeronautics programs.

MISSION

Kent State University Mission Statement

To transform lives by providing access and opportunity, fostering diverse and inclusive communities, and advancing the power of discovery, learning and creative expression.

College of Aeronautics and Engineering Mission Statement

- To embrace a unique synergy of aeronautics, engineering and technologies, positively changing the trajectory of the regional, national and global community by;
- Providing a dynamic educational experience that fosters experiential learning;
- Cultivating innovative research that transforms ideas into reality; and
- Producing forward-thinking professionals, empowered through their diverse and collective perspectives, dedicated to overcoming limits and improving lives.

SECTION 1. STUDENTS and STUDENT SUPPORT SERVICES

1.1 STUDENT ADMISSIONS

Standards for the admission of students to Kent State University are based on the criteria available on the Kent State Admissions page (Admissions | Kent State University). If a program specifies specific admissions criteria, those criteria are listed on that program's University Catalog page for the 2025-2026 academic year, (https://catalog.kent.edu/). In cases where students are applying to a program with specific admissions criteria, the application is first reviewed by Kent State Admissions Department.

The following program has specific admissions criteria for the Fall 2025 admission cycle:

- B.S. Degree, Professional Pilot
    - Students must complete a pre-admission evaluation called Casper, offered by Acuity Insights, to be considered for admission, https://acuityinsights.app/casper/.
    - Students will be admitted into the B.S. Degree in Aeronautics, Aeronautical Studies before being offered admittance into the Professional Pilot Program. This will allow them to begin any scholarship or financial aid applications while completing the evaluation and waiting for the final decision on the Professional Pilot admittance.
    - Students are enrolled in cohorts of 90 students.
    - More information can be found at https://www.kent.edu/cae/important-information-future-students-interested-career-pilot.

- B.S. Degree, Aviation Maintenance Management
    - Admission to this major is selective. Applicants must hold Airframe and Powerplant certificates issued by the Federal Aviation Administration (FAA) or the equivalent certification from an International Civil Aviation Administration (ICAO) member state.

1.2 EVALUATING STUDENT PERFORMANCE

Student performance is evaluated in many ways including viewing student test scores (for initial class placements), transcripts, and grades, exploring reasons behind holds on student accounts, communicating with professors, and the use of Early Alert System. The Early Alert Systems allows our faculty to notify the Center for Undergraduate Excellence of a potential academic issue or attendance issues. The Center for Undergraduate Excellence will then contact the student's Academic Advisor within our college to initiate counseling.

To compliment the Early Alert System, CAE has implemented a new CAE Student Success Coaching Program, called CAE Elevate. Starting with the Fall 2023 semester, all Freshman students whose major program of study GPA requirement is at or below the minimum will be identified and invited to 6 voluntary academic success coaching sessions. These sessions will comprise of topics such as time management, planning, study skills, etc. In addition, starting with the Fall of 2024 the University will be offering new tutoring opportunities with the new Navigate Tutoring system to address student success. The system will offer students tutoring sessions based on their individual course schedule.

In addition to the Early Alert System, the University has an Academic Standing policy for all majors. The Academic Standing Policy is as follows.

In Good Academic Standing
Students with a cumulative 2.00 grade point average or above are in good academic standing. Students with a cumulative grade point average below 2.00 are placed on academic probation. Different areas of the institution may also establish criteria for good standing as appropriate for each area.

Semester Warning
Students who receive a grade point average of less than 2.00 in any given semester will be placed on "SEMESTER WARNING."

Midterm Warning
Students who receive a midterm grade point average of less than 2.00 will be placed on "Midterm Warning."

Academic Probation
Students who fail to maintain a cumulative grade point average of 2.00 will be placed on academic probation. This probation signifies that the cumulative performance is below the minimum university requirement for graduation. Students on probation will be notified by their college/campus dean's office. In addition, the following students will be placed on probation:

1. Students readmitted to the university after being dismissed because of poor scholarship.
2. Transfer students whose records at all previous institutions do not meet the minimum grade point average requirements of Kent State University.

Probation is not a penalty but an emphatic warning to the students that the quality of work must improve if they are to obtain the minimum grades required for graduation. Students placed on probation must show considerable improvement in classwork or they will be dismissed from university.

Students must reduce the course load as prescribed by the academic dean, in no case exceeding 15 hours. The students also should reduce participation in social and extracurricular activities.

Students are removed from probation only when the work meets the grade point average and other requirements stated above.

In addition, specifically designed for the Professional Pilot (PROP) program, the following academic performance program was developed by our college faculty. The program is as follows.

1. “Good Program Standing” = Above 2.50 overall and major GPA. If below the minimum, students will be placed on academic probation.
    - Students will receive a reminder of a "Program Warning" in Talon when they start the first flight course/are a new student to the program each semester, they will need to read and sign off in acknowledgment.

2. “Program Warning” = Students between a 2.50 and 2.75 overall OR major GPA will be placed on program warning, in which they will receive a warning letter, information on our academic support program, CAE Elevate, and will be encouraged to meet with their academic advisor. They will also be notified that dropping below 2.50 overall OR major GPA will result in “PROP Academic Probation”.
    - Students will be told they will be moved to Aeronautical Studies program if they are on probation for one semester and cannot increase overall and major GPA to 2.50

3. “PROP Academic Probation” = Students who fall below a minimum 2.50 overall OR major GPA will be placed on academic probation for two semesters.
    - Students will receive a probation letter with information on academic support, will be required to meet with their academic advisor, and will have two semesters to raise their GPA to the required minimum level. Students may be placed on probation a maximum of one time. Students who are unable to return to the minimum level will be told they will be moved to Aeronautical Studies or another qualifying major of their choosing if they are on probation for a semester and cannot increase overall and major GPA to 2.50.

In terms of monitoring graduation requirements, overall student progress is monitored by advisors and the student through the Graduation Planning System (GPS) audit. Students are aware that the GPS is a “checklist to graduation” and the GPS is covered with students during advising appointments. Students always have access to their own GPS. All program requirements are broken down by specific courses in designated sections for their major, minor, concentration, Kent Core, and other University requirements. “Courses in progress” are highlighted and when a course is complete it is checked off as complete. Students have access to their audit in Flashline and are encouraged to use the audit along with their Roadmap (Kent’s term for Program of Study) as a tool when planning out their future semesters. The GPS system additionally provides a view of the students overall GPA and “in-major” GPA. This is important in tracking performance because there are overall and “in-major” GPA requirements for graduation.

Aside from the GPS system, we have changed our documentation and approval process for prerequisite, overrides, and waivers of required courses. Our current advising system is an outdated and cumbersome platform. Therefore, CAE is testing out a new approval flow process utilizing Microsoft

Teams that clearly document what override was requested and the approval/rejection status along with comments. This new approval process will allow our advisors to document all emails/correspondence and approval/denials regarding prerequisite overrides and waivers of required courses. Finally, the authority for approval of course requirements is no longer delegated to the advising office; only the Associate Dean, Academic Affairs may approve course substitutions for graduation.

Students are not able to register for courses without the required prerequisites and/or corequisites without an override put into the system by an advisor. Students are also required to attend mandatory advising once per semester to review course information, including completion of prerequisites. During their advising appointment, a student's semester schedule is revised to ensure timely completion of their program, while fulfilling all necessary requirements in the order that they are recommended, to the greatest extent possible. Advisors document any approved overrides in KSU Advising.

1.3 TRANSFER STUDENTS AND TRANSFER COURSES

Kent State University and the College of Aeronautics and Engineering (CAE) have a commitment to ensure the accommodation of transfer students from other institutions to facilitate student success and retention at Kent State University. Transfer courses that meet Kent State University's Kent Core Requirements are evaluated, accepted and integrated into the transcripts of transfer students. The evaluation, acceptance and integration of degree specific courses is initiated by the Credit Transfer Office and completed in in CAE by academic advisors. As necessary, academic advisors consult with the college's Associate Dean of Academic Affairs, academic program directors and/or specific faculty during the evaluation process.

As a member of the University System of Ohio (USO), Kent State University follows the statewide transfer credit policies that align courses throughout the Ohio system. Included among guaranteed transfer credit initiatives are Advanced Placement, Career-Technical Assurance Guides, Tech-Prep, Ohio Transfer Module, Military Training/Experience, and Transfer Assurance Guides. The Ohio Transfer Module (OTM) is either a subset or the complete set of an institution's general education requirements. The OTM contains 36-40 semester hours of courses in the fields of English; mathematics; arts/humanities; social and behavioral sciences; natural sciences. Transfer Assurance Guides (TAGs) are introductory level courses that represent common requirements t majors within various bachelor's degrees. Courses and/or course sequences identified as being a part of the TAG may be offered at any school within the University System of Ohio (USO). TAG courses transfer as direct equivalents and apply to specific majors equitably among all USO institutions.

As a matter of University Policy, it is recommended that transfer applicants complete 12 or more semester hours in college-level coursework with a minimum cumulative GPA of 2.0. Transfer applicants who have completed fewer than 12 semester hours will be evaluated on both collegiate and high school records and must submit a final high school transcript. Once submitted, the University's Transfer Center will automatically conduct a transfer credit evaluation and will send an email notification to the student letting them know that their transfer evaluation is complete.

The following program has specific admissions criteria for the Fall 2025 admission cycle:

- B.S. Degree, Professional Pilot

- Students must have a minimum 2.250 overall GPA in all college-level coursework for admission to the Professional Pilot major.
- Students must complete a pre-admission evaluation called Casper, offered by Acuity Insights, to be considered for admission, https://acuityinsights.app/casper/.
- Students will be admitted into the B.S. Degree in Aeronautics, Aeronautical Studies before being offered admittance into the Professional Pilot Program. This will allow them to begin any scholarship or financial aid applications while completing the evaluation and waiting for the final decision on the Professional Pilot admittance.
- Students are enrolled in cohorts of 90 students.
- More information can be found at https://www.kent.edu/cae/important-information-future-students-interested-career-pilot.

- B.S. Degree, Aviation Maintenance Management
    - Admission to this major is selective. Applicants must hold Airframe and Powerplant certificates issued by the Federal Aviation Administration (FAA) or the equivalent certification from an International Civil Aviation Administration (ICAO) member state.

1.4 ADVISING AND CAREER GUIDANCE

The College of Aeronautics and Engineering Student Success Center has five dedicated non-faculty advisors. These staff members have the responsibility of academic advising for the students in the college, though they may also have additional non-advising responsibilities (e.g. Director of DEI, Living Learning Community Liaison, etc.). Students in the College are currently assigned an academic advisor based upon the first letter of their last name. Advisor assignments can be found on Flashline under the Student Information section as well as on the student's GPS audit. Academic advising at Kent State requires all undergraduate students to meet with their assigned advisor once per semester to discuss their next semester's courses. However, students frequently take advantage of speaking with their advisor more often about the many ways to enhance their success as a college student.

The Student Success Services office consists of all advisors, program directors, and Associate Deans. It is traditionally open Monday–Friday: 8:00 am–5:00 pm, but also conducts walk-in advising hours the first two weeks of the fall and spring semesters. All other appointments are scheduled and are 30 minutes in length. Additionally, virtual and evening appointments have been offered, as well as staffing of a "talk to an advisor" open house which runs several times a semester.

Efforts at first-year student retention begin in the freshmen year with mandatory student advising and an orientation process that utilizes the single-credit freshman first year flashes 101 course. The college has initiated a Living Learning Community (LLC), which provides a unique and supportive environment for first- and second-year students of any major in CAE. Housed in Koonce Hall, membership includes living with other students who understand the demands of your degree, attending academic and social events provided in the hall and around campus, and receiving guidance from experienced students, faculty, and staff. Students involved in Living Learning Programs at Kent State demonstrate higher GPAs and the ability to complete more credit hours than non-LLP students. They have increased academic support opportunities and develop a greater connection to the university and with like-minded students that will last their entire college experience.

In terms of Career Guidance, CAE Students have access to one-on-one career advising appointments with two career advisors, Delyash Tsartsaeva, and Steven Nowinski.

Delyash Tsartsaeva is a career advisor assigned to the College of Aeronautics and Engineering (CAE) by Kent State University's Career, Exploration and Development department (CED). Students can choose to meet with Delyash for 30-60 minutes intervals for one-on-one career advising throughout the week either at the CAE on Wednesdays or at various other offices around campus. Delyash specializes in assisting students exploring multiple majors/career paths, international students, and graduate students. In addition, Delyash hosts career preparation workshops and presentations for the college, such as the Prepare and Internship Fairs.

Steven Nowinski specializes in internship and co-op search. Steven has appointment slots available for students to schedule 30-minute meetings 14.5 hours each week and is located in the college's Student Succes Center as an on-call Career Advisor for students requiring immediate and urgent assistance. Upon request Steven will also facilitate connecting employers with CAE students as he specializes in managing the college's employer recruiting relationships/partnerships. In addition, Steven manages the CAE's two career fairs each year. One in October and one in March.

1.5 GRADUATION REQUIREMENTS

The university catalog details program requirements for every major, broken down into categories (major requirements, additional requirements, concentration requirements, etc.). Additionally, the university has global education, writing intensive, experiential learning, and upper division requirements, all of which are documented in the student's Graduation Plan.

Kent State University uses the Graduation Planning System (GPS), an advising scheme that provides a checklist for students to plan, schedule, and track their academic progress from their first semester through graduation. GPS is comprised of the student's degree audit, which includes all requirements for earning a degree in a specific program. It also includes an individualized plan of study, called the Plan, which is created in consultation between student and advisor and approved by the advisor. This outlines a semester-by-semester schedule that the student must complete to remain on track for graduation. At any point in time, a student and advisor can see all program requirements and their fulfillment status. GPS allows students to view "what if" audits to evaluate progress toward their degree if changes in the academic program are being considered. The GPS system also displays the students in-major and overall GPA and whether those GPA calculations satisfy the graduation requirement. Roadmaps (i.e plans of study) for all CAE programs are found online in the Undergraduate Catalog and are linked from the College of Aeronautics and Engineering website (www.kent.edu/cae). Roadmaps are updated annually and used by the college to convey programmatic changes to the student. Courses laid out in sequence for each Roadmap consider co- requisites, pre-requisites, certifications, and course availability. A student is automatically assigned the roadmap corresponding to the academic year in which they begin. Students may choose to change roadmaps to a later (not earlier) year or version but are strongly encouraged to speak with their academic advisor before doing so.

SECTION 2. PROGRAM EDUCATIONAL GOALS and MISSION STATEMENTS

2.1 PROGRAM EDUCATIONAL GOALS

The Program Educational Goals for all the aeronautics programs align with Kent State University's mission statement: We transform lives and communities through the power of discovery, learning and creative expression in an inclusive environment. Our graduates will be able to transform lives through continued education, professional development or other self-motivated learning. They will also make a difference by pursuing excellence and integrity.

Aeronautics Program Educational Goals

- Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.
- Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.
- Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.
- Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation.

2.2 PROGRAM EDUCATIONAL GOALS CONSTITUIENTS and PLAN OF REVIEW

The Program Educational Goals were generated by the aeronautics faculty. The faculty, led by the Director, School of Aeronautics, ensures that the objectives are consistent with the institutional mission and predict/project what they believe employers and graduate programs are seeking. The program educational objectives are then shared and reviewed with our constituents, the College's Advisory Sub Council for Aeronautics, and our students every two years. With their feedback considered, the program educational goals are iterated once again with faculty and then shared with graduates of the program. The program educational goals are available publicly on the CAE website page for each program.

Below is the Program Educational Goals' (PEG) plan of review. This plan of review will be implemented on a biennial basis.

Table 1 Program Education Goals Plan of Review

Activity	Due Date	Responsibility
CAE Advisory Sub Council members review PEGs at CAE Advisory Meeting.	Spring (Biennial)	Associate Dean, Program Coordinator, Assessment & Accreditation Coordinator
The PEG's are reviewed by Students in the Spring Survey for upcoming Student Graduates.	Spring (Annual)	Assessment & Accreditation Coordinator
Feedback received from CAE Advisory Sub Council and students regarding PEGs is shared with program faculty at annual fall meeting.	Fall faculty meeting (Biennial)	Associate Dean, Program Director
Program Director works with program lead faculty to draft and/or review any changes to PEGs.	End of September (Biennial)	Program Director, Lead Faculty
Program Director presents to aeronautics faculty for review, comments, edits.	End of October (Biennial)	Program Director
Approved changes posted on CAE website and updated in the information management system.	End of November (Biennial)	Assessment & Accreditation Coordinator
Changes go live on CAE Website.	End of December (Biennial)	

2.3 PROGRAM MISSION STATEMENTS

Aeronautical Studies Mission Statement

The mission of the Bachelor of Science degree in Aeronautical Studies is to prepare students for a broad range of professional careers in aviation by equipping graduates with more than foundational knowledge of aviation as well as specialized knowledge from associated disciplines.

Air Traffic and Airspace Management Mission Statement

The mission of the Bachelor of Science in Air Traffic & Airspace Management is to help prepare students for success in numerous aviation-related fields, including those that are emerging such as Advanced Air Mobility (AAM), space traffic management (upper class E traffic management), and remote and automated operations. As a FAA Air Traffic - Collegiate Training Initiative program (AT-CTI), students will receive specialized education and training to help them earn employment and advancement in Air Traffic Control (ATC). Additionally, this program focuses on disciplines such as Aircraft Dispatch (14 CFR Part 65), AAM, and many more.

Aviation Maintenance Management Mission Statement

The mission of the Bachelor of Science in Aviation Maintenance Management is to prepare students with the highest quality education for a career in aviation maintenance management and to provide aviation maintenance organizations with qualified candidates who possess skill sets consisting of solid management and communication principles as well as technical skills consistent with those of successful

aviation maintenance professionals.

Aviation Management Mission Statement

The mission for the Bachelor of Science in Aviation Management is to prepare students for careers in aviation management and provide professional aviation with qualified graduates who possess skill sets that comprise management principles, budgetary and financial components, and technical knowledge consistent with those of successful aviation professionals.

Professional Pilot Mission Statement

The mission of the Bachelor of Science in Professional Pilot is to prepare students to be professional pilots and enable them to obtain Federal Aviation Administration certificates and ratings required for giving flight and ground instruction and commercial and instrument operations in federally regulated commercial aviation operations.

Unmanned Aircraft Systems Flight Operations Mission Statement

The mission of the Bachelor of Science in Unmanned Aircraft Systems Flight Operations, as an FAA Collegiate Training Institution for UAS (UAS-CTI), is to cultivate a new generation of professionals equipped with knowledge, skills, and technological awareness to excel in the dynamic field of unmanned aviation. Our mission is to provide students with a comprehensive education that combines cutting-edge technological expertise with a deep understanding of the regulatory, operational, and safety considerations essential to the responsible and effective use of unmanned aircraft systems (UAS), and Advanced Air Mobility (AAM).

SECTION 3. STUDENT LEARNING OUTCOMES

Student Learning Outcomes (SLO) are established by AABI and the Aeronautics Faculty. The SLO's help identify what students will learn within their respective program of study. AABI SLOs are set by the AABI Board of Trustees, while the faculty have developed a set of SLO's for each program that are mapped to the AABI SLOs. Thus, the faculty developed and approved SLOs for each degree will be used for student assessments. The SLO's are available publicly on both the University Catalog page as well as the CAE website page for each program. The University Catalog uses the term "Program Learning Outcomes" instead of "Student Learning Outcomes". This is a term set by the University and cannot be changed on the catalog.

3.1 AABI STUDENT LEARNING OUTOMCES

1. Apply mathematics, science, and applied sciences to aviation-related disciplines;
2. Analyze and interpret data;
3. Work effectively on teams;
4. Make professional and ethical decisions;
5. Communicate effectively, using written communication skills appropriate to aviation-related disciplines;

6. Communicate effectively, using oral communication skills appropriate to aviation-related disciplines;
7. Explain the value of and need for life -long learning in aviation careers.
8. Use the techniques, skills, and modern technology necessary for professional practice;
9. Apply pertinent knowledge in identifying and solving problems;
10. Apply knowledge of business sustainability to aviation issues;
11. Describe the professional attributes, requirements or certifications, and planning applicable to aviation careers.
12. Describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems.
13. Evaluate aviation safety and the impact of human factors on safety.
14. Discuss the impact on aviation operations of international aviation law, including applicable international Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues.
15. Explain the integration of airports, airspace, and air traffic control in managing the National Airspace System.
16. Discuss the impact of meteorology and environmental issues on aviation operations.

3.2 AERONAUTICS PROGRAM STUDENT LEARNING OUTCOMES (SLO'S)

The following are the aeronautics program Student Learning Outcomes that were developed by the faulty. They are subject to change by recommendation from the program director, and by official vote by the faculty. Each major within the aeronautics department has its own set of specific Student Learning Outcomes. These SLOs are mapped to and represent each of AABI's SLO. The faculty developed SLO's relationship maps to AABI's SLO's are displayed within this section four. The faculty developed SLO's will be used for student assessments.

3.3.1 Aeronautical Studies Student Learning Outcomes

1. Explain the physics of flight, aerodynamics, and the effects of the atmosphere.
2. Describe the operation of aircraft systems and how they integrate.
3. Demonstrate the process of Air Traffic Control and describe the components of the National Airspace System.
4. Investigate physiological and human factors as they relate to aviation safety.
5. Accomplish successful academic work in aviation and associated academic disciplines in preparation for professional work in the aviation industry.

3.3.2 Air Traffic and Airspace Management Student Learning Outcomes

1. Demonstrate the knowledge and skills of Air Traffic & Air Space Management, as set forth by the AT-CTI program requirements, by applying rules and procedures needed to safely control traffic in the National Airspace System (NAS).
2. Demonstrate the necessary knowledge of the rules and procedures needed to test for the Federal Aviation Administration's 14 CFR Part 65 Aircraft Dispatcher Certification.
3. Demonstrate knowledge of and ability to adapt to the changing air traffic and airspace management technology and rules as the global aviation industry grows.

3.3.3 Aviation Maintenance Management Student Learning Outcomes

1. Employ requisite knowledge, skills and techniques to manage others in the process of the inspection, repair and return of aircraft to service.
2. Integrate skills and knowledge essential to the management of aircraft maintenance programs with a focus on safety and efficiency.
3. Incorporate skills and knowledge needed to effectively lead and manage a team of people working in a maintenance repair organization.

3.3.4 Aviation Management Student Learning Outcomes

1. Demonstrate an understanding of the role of federal legislation and regulatory policies in the management of agencies, airlines, airports, businesses, and other organizations in professional aviation.
2. Demonstrate and apply knowledge and understanding of the technical details involved in the effective management of employees and operational systems in professional aviation.
3. Accomplish successful academic work in aviation and allied academic disciplines in preparation for graduate level or professional credentialing.

3.3.5 Professional Pilot Student Learning Outcomes

1. Ability to demonstrate the knowledge, skills, and techniques required to safely operate in single-pilot or multi-crew aircraft operations under FAR Parts 121, 135, 91K and other commercial aviation operations.
2. Ability to analyze available information and problem solve as part of an aircrew, with respect to aircraft operation, airline operations, physiology, safety, and emergency or challenging situations.
3. Demonstrate the skills of an aviation professional, make ethical decisions, and correlate aviation business principles to operations.
4. Demonstrate instructional level knowledge and skills in application to single-engine and multi-engine, VFR or IFR flight.

3.3.6 Unmanned Aircraft Systems Flight Operations Student Learning Outcomes

1. Demonstrate a comprehensive understanding of unmanned aircraft systems, including their design, operation, and maintenance.
2. Demonstrate the ability to effectively plan, execute, and manage UAS missions for a variety of applications, ensuring optimal performance, data accuracy and safety.
3. Ability to interpret and apply current and future regulations related to airspace, privacy, safety, and data protection.
4. Demonstrate and employ critical thinking and problem-solving techniques when unexpected issues arise to make informed decisions, adapt strategies, and ensure the successful completion of missions while prioritizing safety and mission goals.

Section 4. AERONAUTICS OUTCOMES TO PROGRAM EDUCATIONAL GOALS

Table 2: AABI Student Learning Outcomes in Relation to Program Educational Goals

	Goal 1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**Goal 2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**Goal 3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation. .	**Goal 4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation. (might need updated) .
AABI Outcomes				
a. apply mathematics, science, and applied sciences to aviation-related disciplines		x		
b. analyze and interpret data		x		
c. work effectively on teams	x			x
d. make professional and ethical decisions	x	x	x	x
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines	x	x		
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines	x	x		
g. explain the value of and need for life-long learning in aviation careers			x	
h. use the techniques, skills, and modern technology necessary for professional practice		x		

i. identify and solve problems		x	x	
j. apply knowledge of sustainability to aviation issues			x	
k. Describe the professional attributes, requirements or certifications, and planning applicable to aviation careers	x	x		x
l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems		x	x	
m. evaluate aviation safety and the impact of human factors on safety		x		
n. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues			x	
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System		x	x	
p. discuss the impact of meteorology and environmental issues on aviation operations		x		

Table 3: Aeronautical Studies SLOs in Relation to Program Educational Goals

	1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.	**4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation.
AEST Student Learning Outcomes				
SLO 1: Explain the physics of flight, aerodynamics, and the effects of the atmosphere.	**X**	**X**		
SLO 2: Describe the operation of aircraft systems and how they integrate.	**X**	**X**		
SLO 3: Demonstrate the process of Air Traffic Control and distinguish the National Airspace System.			**X**	**X**
SLO 4: Investigate physiological and human factors as they relate to aviation safety.		**X**	**X**	
SLO 5: Accomplish successful academic work in aviation and associated academic disciplines in preparation for professional work in the aviation industry.	**X**		**X**	

Table 4: Air Traffic and Airspace Management SLOs in Relation to Program Educational Goals

	1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.	**4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation.
ATAM Student Learning Outcomes				
SLO 1: Demonstrate the knowledge and skills of Air Traffic & Air Space Management, as set forth by the AT-CTI program requirements, by applying rules and procedures needed to safely control traffic in the National Airspace System (NAS).	**X**	**X**	**X**	**X**
SLO 2: Demonstrate the necessary knowledge of the rules and procedures needed to test for the Federal Aviation Administration's 14 CFR Part 65 Aircraft Dispatcher Certification.		**X**		
SLO 3: Demonstrate knowledge of and ability to adapt to the changing air traffic and airspace management technology and rules as the global aviation industry grows.	**X**	**X**	**X**	**X**

Table 5: Aviation Maintenance Management SLOs in Relation to Program Educational Goals

	1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.	**4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation.
AVMM Student Learning Outcomes				
SLO 1: Employ requisite knowledge, skills and techniques to manage others in the process of inspection, repair and return of aircraft to service.	**x**			
SLO 2: Integrate skills and knowledge essential to the management of aircraft maintenance programs with a focus on safety and efficiency.		**x**	**x**	
SLO 3: Incorporate skills and knowledge needed to effectively lead and manage a team of people working in a maintenance repair organization.	**x**			**x**

Table 6: Aviation Management SLOs in Relation to Program Educational Goals

	1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.	**4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation.
AVMN Student Learning Outcomes				
SLO 1: Demonstrate an understanding of the role of federal legislation and regulatory policies in the management of agencies, airlines, airports, businesses, and other organizations in professional aviation.	**X**	**X**	**X**	**X**
SLO 2: Demonstrate and apply knowledge and understanding of the technical details involved in the effective management of employees and operational systems in professional aviation.	**X**	**X**	**X**	
SLO 3: Accomplish successful academic work in aviation and allied academic disciplines in preparation for graduate level or professional credentialing.	**X**	**X**	**X**	

Table 7: Professional Pilot SLOs in Relation to Program Educational Goals

	1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.	**4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation. (might need updated)
PROP Student Learning Outcomes				
SLO 1: Ability to demonstrate the knowledge, skills, and techniques required to safely operate in single-pilot or multi-crew aircraft operations under FAR Parts 121, 135, 91K and other commercial aviation operations.	x	x		
SLO 2: Ability to analyze available information and problem solve as part of an aircrew, with respect to aircraft operation, airline operations, physiology, safety, and emergency or challenging situations.	x	x		
SLO 3: Demonstrate the skills of an aviation professional, make ethical decisions, and correlate aviation business principles to operations.		x	x	x
SLO 4: Demonstrate instructional level knowledge and skills in application to single-engine and multi-engine, VFR or IFR flight.		x		x

Table 8: Unmanned Aircraft Systems Flight Operations SLOs in Relation to Program Educational Goals

	1: Graduates will exhibit the qualities of excellence, integrity, leadership, management, and professionalism within their area of professional specialization in aviation.	**2:** Graduates will demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.	**3:** Graduates will demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity, and innovation within their area of professional specialization in aviation.	**4:** Graduates will manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect, and perseverance within their area of professional specialization in aviation.
USAO Student Learning Outcomes				
SLO 1: Demonstrate a comprehensive understanding of unmanned aircraft systems, including their design, operation, and maintenance.		**X**	**X**	**X**
SLO 2: Demonstrate the ability to effectively plan, execute, and manage UAS missions for a variety of applications, ensuring optimal performance, data accuracy and safety.	**X**		**X**	
SLO 3: Ability to interpret and apply current and future regulations related to airspace, privacy, safety, and data protection.	**X**	**X**	**X**	**x**
SLO 4: Demonstrate and employ critical thinking and problem-solving techniques when unexpected issues arise to make informed decisions, adapt strategies, and ensure the successful completion of missions while prioritizing safety and mission goals.	**X**	**X**	**X**	**X**

4.2 RELATIONSHIP OF AABI STUDENT LEARNING OUTCOMES (SLO) to FACULTY DEVELOPED STUDENT LEARNNG OUTCOMES (SLO) BY MAJOR

Table 9: Relationship of AABI SLO's to Aeronautical Studies SLO's

	SLO 1: Explain the physics of flight, aerodynamics, and the effects of the atmosphere.	SLO 2: Describe the operation of aircraft systems and how they integrate.	SLO 3: Demonstrate the process of Air Traffic Control and describe the components of the National Airspace System.	SLO 4: Investigate physiological and human factors as they relate to aviation safety.	SLO 5: Accomplish successful academic work in aviation and associated academic disciplines in preparation for professional work in the aviation industry.
AABI Outcomes					
a. apply mathematics, science, and applied sciences to aviation-related disciplines	X				
b. analyze and interpret data	X				
c. work effectively on teams				X	
d. make professional and ethical decisions			X		
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines				X	X
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines				X	
g. explain the value of and need for life-long learning in aviation careers			X		
h. use the techniques, skills, and modern technology necessary for professional practice		X			
i. identify and solving problems	X				X
j. apply knowledge of sustainability to aviation issues		X			
k. describe the professional attributes, requirements or certifications, and planning applicable to aviation careers				X	X

l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems		X			
m. evaluate aviation safety and the impact of human factors on safety				X	
n. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues			X		
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System			X		
p. discuss the impact of meteorology and environmental issues on aviation operations	X				

Table 10: Relationship of AABI SLO's to Air Traffic and Airspace Management SLO's

	SLO 1: Demonstrate the knowledge and skills of Air Traffic & Air Space Management, as set forth by the AT-CTI program requirements, by applying rules and procedures needed to safely control traffic in the National Airspace System (NAS).	SLO 2: Demonstrate the necessary knowledge of the rules and procedures needed to test for the Federal Aviation Administration's 14 CFR Part 65 Aircraft Dispatcher Certification.	SLO 3: Demonstrate knowledge of and ability to adapt to the changing air traffic and airspace management technology and rules as the global aviation industry grows.
AABI Outcomes			
a. apply mathematics, science, and applied sciences to aviation-related disciplines	x	x	
b. analyze and interpret data	x	x	
c. work effectively on teams	x		x

d. make professional and ethical decisions	x	x	
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines		x	x
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines	x	x	
g. explain the value of and need for life-long learning in aviation careers			x
h. use the techniques, skills, and modern technology necessary for professional practice	x	x	
i. identify and solving problems	x	x	
j. apply knowledge of sustainability to aviation issues			x
k. describe the professional attributes, requirements or certifications, and planning applicable to aviation careers			**X**
l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems	**X**	**X**	**X**
m. evaluate aviation safety and the impact of human factors on safety	**X**	**X**	**X**
n. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues		**X**	
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System	**X**	**X**	
p. discuss the impact of meteorology and environmental issues on aviation operations	**X**	**X**	

Table 11: Relationship of AABI SLO's to Aviation Maintenance Management SLO's

	SLO 1: Employ requisite knowledge, skills and techniques to manage others in the process of inspection, repair and return of aircraft to service.	SLO 2: Integrate skills and knowledge essential to the management of aircraft maintenance programs with a focus on safety and efficiency.	SLO 3: Incorporate skills and knowledge needed to effectively lead and manage a team of people working in a maintenance repair organization.
AABI Outcomes			
a. apply mathematics, science, and applied sciences to aviation-related disciplines	x		
b. analyze and interpret data	x	x	
c. work effectively on teams		x	x
d. make professional and ethical decisions		x	
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines	x		
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines	x		
g. explain the value of and need for life-long learning in aviation careers			x
h. use the techniques, skills, and modern technology necessary for professional practice	x		
i. identify and solving problems	x		
j. apply knowledge of sustainability to aviation issues		x	
k. describe the professional attributes, requirements or certifications, and planning applicable to aviation careers			x
l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems	x		

m. evaluate aviation safety and the impact of human factors on safety		x	
m. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues	x		
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System	X		
p. discuss the impact of meteorology and environmental issues on aviation operations		X	

Table 12: Relationship of AABI SLO's to Aviation Management SLO's

	SLO 1: Demonstrate an understanding of the role of federal legislation and regulatory policies in the management of agencies, airlines, airports, businesses, and other organizations in professional aviation	SLO 2: Demonstrate and apply knowledge and understanding of the technical details involved in the effective management of employees and operational systems in professional aviation.	SLO 3: Accomplish successful academic work in aviation and allied academic disciplines in preparation for graduate level or professional credentialing.
AABI Outcomes			
a. apply mathematics, science, and applied sciences to aviation-related disciplines		X	X
b. analyze and interpret data	X	X	X
c. work effectively on teams	X	X	X
d. make professional and ethical decisions	X	X	X
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines	X	X	X
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines	X	X	X

g. explain the value of and need for life-long learning in aviation careers	X	X	X
h. use the techniques, skills, and modern technology necessary for professional practice		X	X
i. identify and solving problems		X	X
j. apply knowledge of sustainability to aviation issues	X	X	X
k. describe the professional attributes, requirements or certifications, and planning applicable to aviation careers	X		X
l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems			
m. evaluate aviation safety and the impact of human factors on safety	X	X	
n. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues	X	X	X
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System	X	X	X
p. discuss the impact of meteorology and environmental issues on aviation operations			X

Table 13: Relationship of AABI SLO's to Professional Pilot SLO's

	SLO 1: Ability to demonstrate the knowledge, skills, and techniques required to safely operate in single-pilot or multi-crew aircraft operations under FAR Parts 121, 135, 91K and other commercial aviation operations.	SLO 2: Ability to analyze available information and problem solve as part of an aircrew, with respect to aircraft operation, airline operations, physiology, safety, and emergency or challenging situations.	SLO 3: Demonstrate the skills of an aviation professional, make ethical decisions, and correlate aviation business principles to operations.	SLO 4: Demonstrate instructional level knowledge and skills in application to single-engine and multi-engine, VFR or IFR flight.
AABI Outcomes				
a. apply mathematics, science, and applied sciences to aviation-related disciplines	x	x		
b. analyze and interpret data		x		x
c. work effectively on teams			x	
d. make professional and ethical decisions		x	x	x
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines			x	x
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines		x	x	x
g. explain the value of and need for life-long learning in aviation careers			x	
h. use the techniques, skills, and modern technology necessary for professional practice			x	x
i. identify and solving problems		x	x	
j. apply knowledge of sustainability to aviation issues		x	x	
k. describe the professional attributes, requirements or certifications, and planning applicable to aviation careers			x	

l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems	x	x		x
m. evaluate aviation safety and the impact of human factors on safety	x		x	
n. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues		x	x	
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System		x	x	
p. discuss the impact of meteorology and environmental issues on aviation operations	x	x		x

Table 14: Relationship of AABI SLO's to Unmanned Aircraft System Flight Operations SLO's

	SLO 1: Demonstrate a comprehensive understanding of unmanned aircraft systems, including their design, operation, and maintenance.	SLO 2: Demonstrate the ability to effectively plan, execute, and manage UAS missions for a variety of applications, ensuring optimal performance, data accuracy and safety.	SLO 3: Ability to interpret and apply current and future regulations related to airspace, privacy, safety, and data protection.	SLO 4: Demonstrate and employ critical thinking and problem-solving techniques when unexpected issues arise to make informed decisions, adapt strategies, and ensure the successful completion of missions while prioritizing safety and mission goals.
AABI Outcomes				
a. apply mathematics, science, and applied sciences to aviation-related disciplines	x	x	x	
b. analyze and interpret data	x	x	x	
c. work effectively on teams	x	x	x	

d. make professional and ethical decisions	x	x	x	x
e. communicate effectively, using written communication skills appropriate to aviation-related disciplines	x	x	x	x
f. communicate effectively, using oral communication skills appropriate to aviation-related disciplines	x	x	x	x
g. explain the value of and need for life-long learning in aviation careers		x	x	x
h. use the techniques, skills, and modern technology necessary for professional practice	x	x	x	x
i. identify and solving problems	x	x	x	x
j. apply knowledge of sustainability to aviation issues				x
k. describe the professional attributes, requirements or certifications, and planning applicable to aviation careers				x
l. describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems	x	x	x	
m. evaluate aviation safety and the impact of human factors on safety	x	x	x	x
n. discuss the impact on aviation operations of international aviation law, including applicable International Civil Aviation Organization (ICAO) or other international standards and practices; and applicable national aviation law, regulations and labor issues			x	x
o. explain the integration of airports, airspace, and air traffic control in managing the National Airspace System	x	x	x	x
p. discuss the impact of meteorology and environmental issues on aviation operations	x	x	x	

4.3 FACULTY DEVELOPED STUDENT LEARNING OUTCOMES (SLO) RELATIONSHIP TO REQUIRED COURSEWORK BY MAJOR

Table 15: Relationship of Aeronautical Studies SLO to Required Coursework

Outcome\Objective	AERN 15000	AERN 15745	AERN 25100	AERN 25250	AERN 25350	AERN 25351	AERN 30000	AERN 35020	AERN 35040	AERN 35150	AERN 35341	AERN 45030	AERN 45099	AERN 45130	AERN 45135	AERN 45150	AERN 45250	AERN 45791	AERN 35760
AEST SLOs																			
SLO 1: Explain the physics of flight, aerodynamics, and the effects of the atmosphere.	**I**	**I**														**A**			
SLO 2: Describe the operation of aircraft systems and how they integrate.								**R**	**I**	**R**	**I**	**A**							
SLO 3: Demonstrate the process of Air Traffic Control and describe the components of the National Airspace System.					**A**														
SLO 4: Investigate physiological and human factors as they relate to aviation safety.														**I**	**A**				
SLO 5: Accomplish successful academic work in aviation and associated academic disciplines in preparation for professional work in the aviation industry.							**R**						**A**						

I-Introduced, R-Reinforced, A-Assessed

Table 16: Relationship of Air Traffic and Airspace Management SLO to Required Coursework

Outcome\Objective	AERN 15000	AERN 15745	AERN 25100	AERN 25250	AERN 25252	AERN 25350	AERN 25351	AERN 25800	AERN 30000	AERN 35040	AERN 35250	AERN 35350	AERN 35351	AERN 35650	AERN 35850	AERN 35851	AERN 45010	AERN 45020	AERN 45030	AERN 45130	AERN 45135	AERN 45150	AERN 45250	AERN 45345	AERN 45346	AERN 45399	AERN 45499	AERN 45720	AERN 45791	AERN 45820
ATAM SLOs																														
SLO 1: Demonstrate the knowledge and skills of Air Traffic & Air Space Management, as set forth by the AT-CTI program requirements, by applying rules and procedures needed to safely control traffic in the National Airspace System (NAS).						**I**	**I**					**R**	**R**											**R**	**R**		**A**			
SLO 2: Demonstrate the necessary knowledge of the rules and procedures needed to test for the Federal Aviation Administration's 14 CFR Part 65 Aircraft Dispatcher Certification.																	**I, A**	**I, A**												
SLO 3: Demonstrate knowledge of and ability to adapt to the changing air traffic and airspace management technology and rules as the global aviation industry grows.								**I**	**R**		**R**				**R**	**R**					**R**					**A**				**R**

I-Introduced, R-Reinforced, A-Assessed

Table 17: Relationship of Aviation Maintenance Management SLO to Required Coursework

Outcome\Objective	AERN 22500	AERN 30000	AERN 32400	AERN 42000	AERN 42799	AERN 45135	AERN 45400
AVMM SLOs							
SLO 1: Employ requisite knowledge, skills and techniques to manage others in the process of inspection, repair and return of aircraft to service.	**I**				**R/A**		
SLO 2: Integrate skills and knowledge essential to the management of aircraft maintenance programs with a focus on safety and efficiency.				**I**	**A**	**R/A**	
SLO 3: Incorporate skills and knowledge needed to effectively lead and manage a team of people working in a maintenance repair organization.	**I**		**R**		**A**		

I-Introduced, R-Reinforced, A-Assessed

Table 18: Relationship of Aviation Management SLO to Required Coursework

Outcome\Objective	AERN 15000	AERN 15745	AERN 25100	AERN 25250	AERN 25350	AERN 25351	AERN 30000	AERN 35031	AERN 35339	AERN 35340	AERN 35341	AERN 45040	AERN 45199	AERN 45130	AERN 45135	AERN 45150	AERN 45299	AERN 45250	AERN 45791
AVMN SLOs																			
SLO 1: Demonstrate an understanding of the role of federal legislation and regulatory policies in the management of agencies, airlines, airports, businesses, and other organizations in professional aviation.	**I**		**I**	**I**	**I**	**I**	**I**	**A**	**A**	**A**	**A**	**R**	**I**		**R**		**R**	**A**	R
SLO 2: Demonstrate and apply knowledge and understanding of the technical details involved in the effective management of employees and operational systems in professional aviation.	**I**	**I**	**I**	**I**	**R**	**R**	**I**	**A**	**R**	**A**	**R**	**R**	**A**	**R**	**R**	**R**	**R**	**R**	R
SLO 3: Accomplish successful academic work in aviation and allied academic disciplines in preparation for graduate level or professional credentialing.							**R**										**A**		

I-Introduced, R-Reinforced, A-Assessed

Table 19: Relationship of Professional Pilot SLO to Required Coursework

Outcome\Objective	AERN 15000	AERN 15740	AERN 15750	AERN 15751	AERN 15752	AERN 15753	AERN 25100	AERN 25250	AERN 25252	AERN 25350	AERN 25351	AERN 30000	AERN 35020	AERN 35040	AERN 35150	AERN 35660	AERN 35661	AERN 35665	AERN 35760	AERN 35761	AERN 45030	AERN 45130	AERN 45135	AERN 45150	AERN 45250	AERN 45550	AERN 45551	AERN 45648	AERN 45649	AERN 45660	AERN 45651	AERN 45710	AERN 45720	AERN 45791
PROP SLOs																																		
SLO 1: Ability to demonstrate the knowledge, skills, and techniques required to safely operate in single-pilot or multi-crew aircraft operations under FAR Parts 121, 135, 91K and other commercial aviation operations.		I																					A										A	A
SLO 2: Ability to analyze available information and problem solve as part of an aircrew, with respect to aircraft operation, airline operations, physiology, safety, and emergency or challenging situations.																			A			A	A											
SLO 3: Demonstrate the skills of an aviation professional, make ethical decisions, and correlate aviation business principles to operations.								A				A													A									
SLO 4: Demonstrate instructional level knowledge and skills in application to single-engine and multi-engine, VFR or IFR flight.																												A						

I-Introduced, R-Reinforced, A-Assessed

Table 20: Relationship of Unmanned Aircraft System Flight Operations SLO to Required Coursework

Outcome\Objective	AERN 15000	AERN 15745	AERN 25100	AERN 25250	AERN 25350	AERN 25351	AERN 25800	AERN 30000	AERN 35040	AERN 35250	AERN 35650	AERN 35810	AERN 35830	AERN 35840	AERN 35892	AERN 45030	AERN 45130	AERN 45135	AERN 45150	AERN 45250	AERN 45791	AERN 45800	AERN 45892	ENGR 445151
UASO SLOs																								
SLO 1: Demonstrate a comprehensive understanding of unmanned aircraft systems, including their design, operation, and maintenance.	I	I	I	I	I	I	I	I	A	A	A	A	A	A	A	R	R	R	R	R	R	A	A	R
SLO 2: Demonstrate the ability to effectively plan, execute, and manage UAS missions for a variety of applications, ensuring optimal performance, data accuracy and safety.	I	I	I	I	I	I	I	I	A	A	A	A	A	A	A	R	R	R	R	R	R	A	A	R
SLO 3: Ability to interpret and apply current and future regulations related to airspace, privacy, safety, and data protection.	I	I	I	I	I	I	I	I	A	A	A	A	A	A	A	A	R	R	R	R	A	R	A	R
SLO 4: Demonstrate and employ critical thinking and problem-solving techniques when unexpected issues arise to make informed decisions, adapt strategies, and ensure the successful completion of missions while prioritizing safety and mission goals.	I	I	I	I	I	I	I	I	A	A	A	A	A	R	R	A	R	R	A	R	A	R	A	R

I-Introduced, R-Reinforced, A-Assessed

4.4 ASSESSMENT EVIDENCE COLLECTION CHARTS by PROGRAM MAJOR

Table 21: Aeronautical Studies Evidence Collection Chart

AEST SLO	Courses	Evidence (Assignments)	Desired Outcome
SLO 1: Explain the physics of flight, aerodynamics, and the effects of the atmosphere.	AERN 45150 FLT DYN.	Final exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
SLO 2: Describe the operation of aircraft systems and how they integrate.	AERN 45030 SYSTEMS II	Exams 1	**75% of the students at least meet the expectations of the item that is being evaluated**.
SLO 3: Demonstrate the process of Air Traffic Control and describe the components of the National Airspace System.	AERN 25350 ATC Fundamentals	Final exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
SLO 4: Investigate physiological and human factors as they relate to aviation safety.	AERN 45135 SAFETY THEORY	HFAC assignments, SMS assignment	**75% of the students at least meet the expectations of the item that is being evaluated**.
SLO 5: Accomplish successful academic work in aviation and associated academic disciplines in preparation for professional work in the aviation industry.	AERN 45099 AERO. STUDIES CAPSTONE	Critical Analysis and Report	**75% of the students at least meet the expectations of the item that is being evaluated**.

Table 22: Air Traffic and Airspace Management Evidence Collection Chart

ATAM SLO	Courses	Evidence (Assignments)	Desired Outcome
SLO 1: Demonstrate the knowledge and skills of Air Traffic & Air Space Management, as set forth by the AT-CTI program requirements, by applying rules and procedures needed to safely control traffic in the National Airspace System (NAS).	AERN 45499 Air Traffic Control Capstone Lab.	Skill Checks 1, 2, 3	**75% of the students at least meet the expectations of the item that is being evaluated**.
SLO 2: Demonstrate the necessary knowledge of the rules and procedures needed to test for the Federal Aviation Administration's 14 CFR Part 65 Aircraft Dispatcher Certification.	AERN 45010 Aircraft Dispatch I	Dispatch I Final Exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 45020 Aircraft Dispatch II	FAA ADX Written Exam	
SLO 3: Demonstrate knowledge of and ability to adapt to the changing air traffic and airspace management technology and rules as the global aviation industry grows.	AERN 45399 Air Traffic Control Capstone	Critical Report	**75% of the students at least meet the expectations of the item that is being evaluated**.

Table 23: Aviation Maintenance Management Evidence Collection Chart

AVMM SLO	Courses	Evidence (Assignments)	Desired Outcome
SLO 1: Employ requisite knowledge, skills, and techniques to manage others in the process of inspection, repair and return of aircraft to service.	AERN42799 Capstone in Av. Mx. Management	Final Project	**75% of the students at least meet the expectations of the item that is being evaluated**.
SLO 2: Integrate skills and knowledge essential to the management of aircraft maintenance programs with a focus on safety and efficiency.	AERN45135 Aviation Safety Theory	Group Assignment - Boeing, HFACS Assignment	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN42799 Capstone in Av. Mx. Management	Final Project	
SLO 3: Incorporate skills and knowledge needed to effectively lead and manage a team of people working in a maintenance repair organization.	AERN42799 Capstone in Av. Mx. Management	Final Project	**75% of the students at least meet the expectations of the item that is being evaluated**.

Table 24: Aviation Management Evidence Collection Chart

AVMN SLO	Courses	Evidence (Assignments)	Desired Outcome
SLO 1: Demonstrate an understanding of the role of federal legislation and regulatory policies in the management of agencies, airlines, airports, businesses, and other organizations in professional aviation.	AERN 35340 (Airport Management)	Final exam and Research Presentations	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 35031 (Transp. Ind. Regs)	Final exam and Research Presentations	
	AERN 35339 (Fixed Base Operator Operations)	Final exam and Research Presentations	
	AERN 35341 (Air Transp. Systems)	Final exam and Research Presentations	
	AERN 45250 (Aviation Law)	Final exam	
SLO 2: Demonstrate and apply knowledge and understanding of the technical details involved in the effective management of employees and operational systems in professional aviation.	AERN 35340 (Airport Management)	Final exam and Research Presentations	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 35031 (Transp. Ind. Regs)	Final exam and Research Presentations	
	AERN 45199 (Airport Operations)	Final Exam, Case Study, and Presentation	
SLO 3: Accomplish successful academic work in aviation and allied academic disciplines in preparation for graduate level education or professional credentialing.	AERN 45299 (Strategic Aviation Management) – Capstone course	Final exam and Course Project	**75% of the students at least meet the expectations of the item that is being evaluated.**

Table 25: Professional Pilot Evidence Collection Chart

PROP SLO	Courses	Evidence (Assignments)	Desired Outcome
1: Ability to demonstrate the knowledge, skills, and techniques required to safely operate in single-pilot or multi-crew aircraft operations under FAR Parts 121, 135, 91K and other commercial aviation operations.	AERN 45720 Crew Resource MGMT	Module 2 and 3 Quizzes	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 45791 Aviation Security and Policy Seminar	Commercial Aviation Operator Security Team Presentation, Midterm Examination	
2: Ability to analyze available information and problem solve as part of an aircrew, with respect to aircraft operation, airline operations, physiology, safety, and emergency or challenging situations.	AERN 45130 Physiology and Human Factors in Aviation	Final Exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 35760 Commercial Pilot Theory	MOCK FAA CAX Written	
	AERN 45135 Aviation Safety Theory	Group Assignment - Boeing, HFACS Assignment	
3: Demonstrate the skills of an aviation professional, make ethical decisions, and correlate aviation business principles to operations.	AERN 25100 Intro to Aviation MGMT	Mid-term Exam, Final Exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 30000 Professional Development in Aeronautics	Ethics Presentation	
	AERN 45250 Aviation Law	Chapter4 Briefs, Chapter 5 and 10 Case Briefs, Final Exam	
4: Demonstrate instructional level knowledge and skills in application to single-engine and multi-engine, VFR or IFR flight.	AERN 45648 Theory of Flight Instruction	FOI and FAA Exams, Private and Commercial Teaching, Review Board	**75% of the students at least meet the expectations of the item that is being evaluated**

Table 26: Unmanned Aircraft System Flight Operations Evidence Collection Chart

UASO SLO	Courses	Evidence (Assignments)	Desired Outcome
SLO 1: Demonstrate a comprehensive understanding of unmanned aircraft systems, including their design, operation, and maintenance.	AERN 45800 Unmanned Aircraft Systems Flight Operations Theory	Final project	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 35810 Unmanned Aircraft Systems	Final Project	
	AERN 35830 Unmanned Aircraft Systems Sensing and Sensor Systems	Final project	
SLO 2: Demonstrate the ability to effectively plan, execute, and manage UAS missions for a variety of applications, ensuring optimal performance, data accuracy and safety.	AERN 25800 Introduction to Unmanned Aircraft Systems	Final exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 45800 Unmanned Aircraft Systems Flight Operations Theory	Final project	
SLO 3: Ability to interpret and apply current and future regulations related to airspace, privacy, safety, and data protection.	AERN 35250 Unmanned Aircraft Systems Law and Regulations	Final Exam	**75% of the students at least meet the expectations of the item that is being evaluated**.
	AERN 45250 Aviation Law	Final Exam, Case Comment	
	AERN 45791 Aviation Security and Policy Seminar	Final Paper, Terrorist Simulation	
	AERN 45800 Unmanned Aircraft Systems Flight Operations Theory	Final project	
SLO 4: Demonstrate and employ critical thinking and problem-solving techniques when unexpected issues arise to make informed decisions, adapt strategies, and ensure the successful completion of missions while prioritizing safety and mission goals.	AERN 45800 Unmanned Aircraft Systems Flight Operations Theory	Final project	**75% of the students at least meet the expectations of the item that is being evaluated**.

SECTION 5. ASSESSMENT and CONTINUOUS IMPROVEMENT

5.1 Student Learning Outcome Assessment and Methods

The assessment of student learning outcomes is an ongoing process, data is collected and analyzed continuously throughout all the aeronautics programs and used to increase student learning. The following techniques are used to gather both direct and indirect feedback on student learning.

5.2 Course Evidence Assessments and Evaluations

At the end of each semester, faculty complete the student assessments for each Student Learning Outcome (SLO) that is being assessed in Canvas Software. The SLO will be assessed according to the courses the faculty have chosen and the method of assessment as outlined in each program's Evidence Collection Chart. Each assessment measures the student performance in the assigned major only, and both the course and method of assessment will not change from semester to semester unless the lead faculty and Program Director approve. Every assessment being completed each semester is determined by the Student Learning Outcome Assessment Cycle Table below.

The Student Learning Outcome Assessment Cycle ensures that each SLO is assessed and evaluated every two years.

Table 27:Student Learning Outcome Assessment Cycle

Student Learning Outcome Assessment Cycle	2023-2024		2024-2025		2025-2026		2026-2027		2027-2028		2028-2029	
	Fall 2023	*Spring 2024*	*Fall 2024*	*Spring 2025*	*Fall 2025*	*Spring 2026*	*Fall 2026*	*Spring 2027*	*Fall 2027*	*Spring 2028*	*Fall 2028*	*Spring 2029*
1, 3	E	A	A, E/C		A, E/C	A	E/C		A, E/C	A	E/C	
2,4	E	A	E/C	A	E/C		A, E/C	A	E/C		A, E/C	A
5	E	A	A, E/C		A, E/C	A	E/C		A, E/C	A	E/C	

Legend: (A)ssess, (E)valuate, (C)hange, if necessary

In addition, to streamline this process, faculty now use their own rubric within Canvas to grade assignments, and the Assessment Scale to assess the SLO. All assessments utilize the scale below.

ASSESSMENT SCALE				
INCOMPLETE-0	Unsatisfactory-2	Developing-3	Meets Expectations-4	Exceeds Expectations-5
Did not complete.	Scores less than 50%	Scores less than 75%, but no less than 50%	Scores 75% or Higher	Scores 90% or Higher

5.3 Evaluation of Assessment Results

Once the assessments are completed each semester, the results are imported from Canvas into Watermark Accreditation software which generates results for each SLO assessed.

At the Fall Faculty Retreat, Faculty will review the historical assessment results from the Watermark reports and comparisons to determine if any adjustments/improvements need to be implemented in the curriculum. The following chart is our Assessment Accountability chart, which lists the steps involved in the evaluation of student assessment data to ensure we are continuously improving our program's curriculum.

Table 28:Assessment Accountability Chart

Calendar Year	Semester Review	Task List	Responsible Person	No Later than date
2025-2026	Student Outcomes	1. Remind Faculty of SO Assessments to complete	Assessment & Accreditation Coordinator (AAC)	End of first week of semester
		2. Faculty updates syllabus to ensure Course Learning Outcomes are mapped to Student Outcomes, prepare canvas for assessment	Individual Faculty Member	End of third week of semester
		3. Faculty conduct assessment	Individual Faculty Member	Various
		4. AAC gathers all assessment data and shares with Program Director and Lead Faculty	AAC	Before the first day of following semester
		5. Program Director and Lead Faculty review raw data to flag any potential issues	Program Director/Lead Faculty	Before Fall Faculty Retreat
		6. Assessment Results and historical data reviewed at Fall Faculty Meeting to determine opportunities for continuous improvement	Program Director/Lead Faculty	Fall Faculty Retreat
		7. Goals necessary for continuous improvement implemented	Program Director/Lead Faculty	End of Fall Semester

5.4 Aeronautics Student Survey by Program Major

Starting with the Spring Semester of 2024, we will begin capturing student ratings for the Program Educational Goals (PEG) for each program. The future graduates will be asked to complete a College of Aeronautics and Engineering (CAE) Graduate Exit Survey. The CAE Graduate Exit Survey will ask them to rate each of the PEGs and SLOs with a rating of "Not At All," "Prepared," " Prepared," " More Than Prepared." This data will allow us to determine if the future graduates think that they have mastered the PEGs.

5.5 Aeronautics Alumni Survey

Every 5 years, Kent State University's Office of Career Exploration and Development issues a student survey to recent graduates. The survey provides feedback regarding the quality of recent undergraduate education (knowledge and skills acquired and curricular and co-curricular activities) and primary activities following graduation (e.g., employment, education, and family). The Graduated Student Survey asks graduates to indicate their overall satisfaction with and perceptions of the university.

5.6. Aeronautics Program Review

To ensure the Aeronautics programs remain current and meet industry standards, a complete program review will be conducted for one program on an annual basis. Each program's curriculum, assessment data, and surveys will be part of the program review process. Lead and key faculty will head the program review for their specific program. The following is the rotation cycle.

Table 29:Program Review Schedule

Academic Year	**2024-2025**	**2025-2026**	**2026-2027**	**2027-2028**	**2028-2029**	**2029-2030**
AEST	**x**					
ATAM		**x**				
AVMM			**x**			
AVMN				**x**		
PROP					**x**	
UASO						**x**

SECTION 6. CURRICULUM

6.1 Department Level:

The College Curriculum Committee (CCC) assists the Chair of the CCC in supervising and coordinating the College's programs, course offerings, and curriculum. The CCC makes recommendations to the CAE Dean on all academic matters that affect the undergraduate programs of the College.

The CCC will make recommendations to the Dean for changes in undergraduate academic programs proposed by the Program Curricular Committees within the CAE. Motions to make changes to an undergraduate academic program must originate from College faculty members within the applicable Academic Program. All required documentation will be provided to the Dean's Office by the CCC Chair. The Dean will process and forward CCC curricular recommendations to University officials and governance bodies as appropriate.

6.2 University Level:

Kent State University Faculty Senate has a curriculum committee which reviews all course and program change requests. The university curriculum committee follows a three-stage approval process which is processed online and can be reviewed on the university-senate website.

SECTION 7. FACILITIES AND EQUIPMENT

The College of Aeronautics and Engineering has over 30 faculty members employed to teach and advise over 600 students in 6 majors. The faculty is a diverse group that helps the college and university achieve the individual and collective mission of preparing well-rounded students who are ready to enter society as productive professionals. The Associate Dean continually monitors staffing levels to ensure all courses meet teaching expectations. Faculty holding the rank of Assistant Professor, Associate Professor, or Professor are required to engage in teaching, service, and scholarship.

7.1 FACULTY EVALUATION

The role of the College in matters of renewal of appointment, performance reviews, and promotion in rank is defined by policies stated in the Full-Time Non-Tenure Track Collective Bargaining Agreement and in the annual Procedures and Policies Governing Review of FTNTT Faculty distributed by the Office of the Provost. In the event that any part of the process described in the Handbook conflicts with the FTNTT CBA, the CBA will take precedence.

Evaluation of full-time non-tenure track faculty shall focus on the role(s) for which they are employed. Typically, that role is primarily instructional, but a faculty member's responsibilities may be assigned in another area. If a faculty member is assigned time per workload statement allocation for a secondary function (e.g., research, service/citizenship, grant writing, curriculum development, administrative

duties, etc.), then that function will be evaluated in proportion to which it was assigned as part of the total workload assignment. The areas of criteria, the dimensions of those criteria, and the scales of measurement used for faculty evaluation will be used in the evaluation, where applicable, as described in that section of the Handbook.

For FTNTT faculty who are in a primarily instructional role, emphasis will be placed on the demonstrated quality of instruction and demonstrated maintenance of currency in the field. Currency may be demonstrated by participation in documented learning opportunities relevant to the teaching assignment, professional presentations and scholarship, maintenance of, or acquisition of relevant certifications and licenses (e.g. CFI for aeronautics faculty teaching theory courses), etc.

7.2 INSTITUTIONAL SUPPORT AND STRUCTURE

The College of Aeronautics and Engineering at Kent State University is led by:

- Dr. Christina L. Bloebaum, Dean
- Dr. Maureen R. McFarland, Associate Dean for Academic Affairs
- Dr. Joycelyn Harrison, Associate Dean for Research and Faculty Affairs
- Tim Kyer, Director of Finance and Operations
- Dr. John Sankovic, Interim Director, School of Engineering
- Dr. Ruben Del Rosario, Interim Director, School of Aeronautics

The current Table of Organization is in ***Appendix A.***

SECTION 8. FACILTIES, EQUIPMENT, and SERVICES

The College of Aeronautics and Engineering (CAE) prides itself on having well maintained buildings with state-of-the-art equipment that promotes faculty-student interaction and learning. The CAE's leadership team continually maintains and monitors all laboratories, flight equipment, and the Kent State University Airport.

8.1 OFFICES, CLASSROOMS AND LABORATORIES

Offices in the College of Aeronautics and Engineering are similarly equipped with desk-top computers or laptops. There are three copiers/printers/scanners that are available to full and part-time faculty and staff. This equipment is in the faculty offices area, the administrative offices and the Advising Office. Kent State University has a Faculty Computer Refresh program which ensures that full-time Kent Campus faculty members have current computers available for their use at minimal or no cost to the department. Under this program, computers are refreshed every three years based on a cycle established by the university. Standard faculty offices are 100 square feet.

Lecture spaces are equipped with an instructor station, projector, document camera and whiteboard. Most spaces have tables and chairs with the exception of one space having pod seating.

CAE classrooms are furnished with the same equipment to include instructor stations, projection

and audio. Computers used for instructor stations and those use in computer classrooms are updated on a regular basis to ensure the most up to date technically possible. Seating in all rooms is primarily tables and chairs. Classrooms are maintained by university custodians and CAE has been fortunate to have an exemplary custodian for several years. All classrooms, labs, and the entire building are virtually spotless on a daily basis. Technology and software are updated to ensure students gain experience on the equipment they will be using once they graduate and become employed.

Construction of an approximately 40,000 square foot addition to the Aeronautics and Engineering Building began in March 2022. The addition is scheduled for occupancy for the fall 2023 semester. The addition will increase the amount of learning, teaching, laboratory, research, and collaborative spaces for all CAE programs.

A complete list of all laboratory spaces along with available equipment is in ***Appendix B.***

8.2 LABORATORY SAFETY

The Office of Environmental Health and Safety is part of Compliance and Risk Management. It is the responsibility of the office to provide health, safety, and environmental compliance services to the University through technical support, consultation, investigation, audits of facilities, and training to ensure an understanding of proper health, safety, and environmental compliance practices. A full list of safety matters they oversee can be found at, www.kent.edu/compliance/environmental-health-and-safety

The Office of Compliance and Risk Management provides mandatory, laboratory safety training for all laboratory workers (principal investigators, staff, faculty students, visiting scholars, etc.) This office also oversees chemical storage/handling and hazardous waste disposal. New faculty are generally required to register for a university-wide training session. Faculty are also encouraged to take the training on a regular basis to remain current on safety standards. All faculty, principal investigators, staff, students and volunteers who will be working in a research laboratory must complete safety training before beginning their lab research. In most laboratories with CAE, safety is discussed at the start of the semester.

SECTION 9. AVIATION SAFETY CULTURE AND PROGRAM

9.1 SAFETY MANAGEMENT SYSTEM

The College of Aeronautics and Engineering (CAE) views safety as the highest priority, and it starts from the top moving down through the administration, faculty, all the way down to the students. The starting point for the department is our Safety Management Systems (SMS).

Our safety culture is driven by CAE's SMS plan, which was created with collaboration by administration, faculty, and students. The work put into creating the plan shows, as administration, faculty, and students understand and use the plan to create "our culture of safety." All procedures and annual safety program review are contained in our "Safety Management System". CAE's SMS functions on the four pillars of SMS, 1) Safety Policy, 2) Safety Risk Management, 3) Safety Assurance, and 4) Safety Culture and Promotion.

9.2 ASSESSMENT

The CAE along with our Aviation Safety Program Manager continuously assesses the safety culture and program through the SMS system. All policies and procedures can be found in the Safety Management Systems Manual.

SECTION 10. RELATIONS with INDUSTRY

CAE Aeronautic' leadership and faculty understand and value the relationship we have with our industry and alumni partners. Industry feedback is the driving force behind keeping the aviation programs relevant and serving their needs.

10.1 CAE ADVISORY SUB COUNCIL, AERONAUTICS

The CAE Advisory Sub council for Aeronautics is made up of 10 individuals representing industry and each degree program. This sub council is our primary tool to bring faculty and industry together. We meet with them twice a year and rely on them for guidance and advice for developing and evaluating each of our programs. Their importance to our programs and our students is represented by the fact that we named them as a constituent for each of our programs. This role enables them to periodically review our Program Educational Goals to ensure we are on track to meeting the needs of the industries we serve.

In addition, we have established industry-relation goals to ensure our programs are continuously improved upon through our relations with our industry representatives. For example, we have implemented goals to ensure that we are continuously expanding our CAE Advisory Sub Council for Aeronautics membership and that we increase our engagement opportunities between these industry professionals and our students.

SECTION 11. AERONAUTIC PROGRAM'S GOALS

11.1 STUDENTS and STUDENT SUPPORT SERVICES		
Goal	**Metric**	**Closing the Loop**
Increase communication on the importance of mental health awareness and services that are available to students.	Annual Build into classroom	Added Koru Program into Introduction to Aeronautics Mental Health Assistance Information added to all Syllabi Offered Mental Health Awareness Presenter
Increase the four-year graduation rate by 5%. Starting with the academic year of 2018 cohort as the baseline.	Annual	Institutional Research Report
Increase engagement opportunities between students and industry professionals, example; Career Fairs, Internships	Master Calendar of Events Events throughout the year	Annual events listing
11.2 PROGRAM MISSION AND EDUCATIONAL GOALS		
Aeronautics Advisory Sub Council Assesses each programs Mission Statements.	Biennial Aeronautics Advisory Sub Council Meeting Minutes provide information on changes/edits.	
Aeronautics Constituents Assess Educational Goals.	Biennial Aeronautics Advisory Sub Council Meeting Minutes provide information on changes/edits. Annual Student Capstone Survey results.	
11.3 STUDENT LEARNING OUTCOMES		
Assess Student Learning Outcomes (SLO) each semester by collecting Assessment Results and student evidence.	75% Target Threshold	
11.4 CURRICULUM		

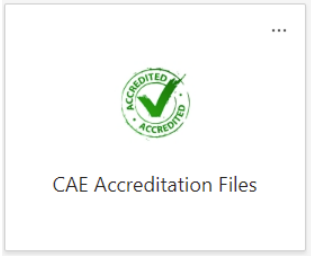
Faculty will review and evaluate each program's assessment data annually for continuous improvement	Annual Fall Faculty Retreat per the schedule	Continuous Improvement Plans/Implementation as necessary
Lead and key faculty will evaluate 1 program annually per the schedule	Based on rotation schedule	Continuous Improvement Plans/Implementation as necessary
11.5 FACULTY AND STAFF		
Maximize consistency for annual course scheduling.	Annual	
Increase training opportunities with more in-house development by utilizing resources such as the Center for Teaching and Learning.	Events throughout the Year	
Review hiring needs for full and part time faculty.	As Needed	
11.6 FACILITIES and EQUIPMENT		
Review and monitor innovative technology/equipment for programs.	Quarterly Meeting	
11.7 AVIATION SAFETY CULTURE AND PROGRAM		
Review SMS with PROP/UASO Faculty Leads, students, and staff to maintain applicability for each program.	Annual	
SMS is introduced, along with the Safety Report Form in AERN 45135 (Safety Theory) curriculum. AERN 45135 is inclusive of all AERN programs.	Class Offered	
Accountable Executive(s) sends out a copy of the current Safety Policy Letter and SMS manual to highlight the importance of our safety program to all CAE staff, faculty, and students.	Start of Each Academic Year	
11.8 RELATIONS WITH INDUSTRY		

Continue to grow CAE Advisory Sub council for Aeronautics membership to further represent all programs.	Binary	
Increase engagement opportunities between students and industry professionals, example; Career Fairs, Internships.	Master Calendar of Events Events throughout the year	

SECTION 12. CAE FACULTY ACCREDITATION INSTRUCTIONS

Syllabi

Each year a syllabus template will be available for use within the "CAE Accreditation Files" Team General Channel in the "Syllabi" folder. All instructors shall utilize the provided CAE syllabus and will ensure that they appropriately fill in the course description, course learning objectives, and pre/co-requisites listed in the University catalog and the Course Information Management System (CIM). The general outline for the course should also be consistent with what is listed in the CIM. If an instructor feels that an update to the description, learning objectives, or course content needs to be made, it is their responsibility to edit the course entry in the CIM and submit for review.



In the syllabus template, instructors will find Student Learning Outcome (SLO) tables like those shown below. These are the outcomes that students must attain prior to graduation for all programs. You will notice they are separated by major SLOs. For courses that are taken within multiple majors, instructors should include applicable SLO tables. Otherwise, include the most appropriate. Instructors should ensure that Course Learning Objectives (CLOs) that speak to specific SLOs, should be identified with a dot in the appropriate CLO column.

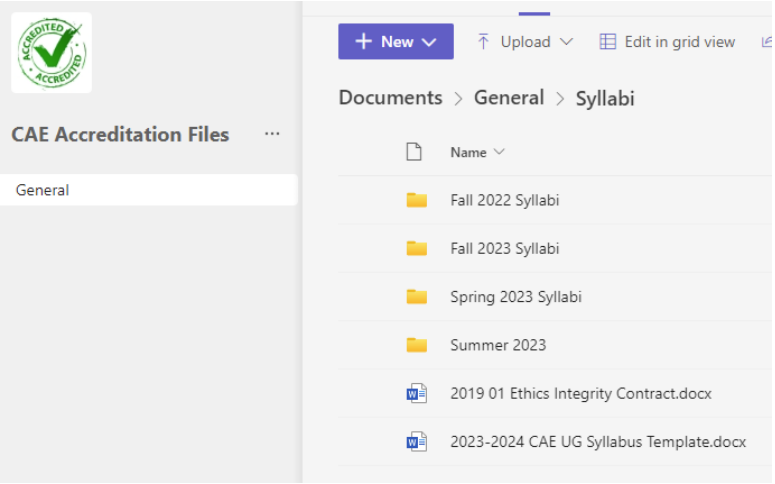
	CLOs						
	1	2	3	4	5	6	7
AABI AEST Student Learning Outcomes. Upon completion, graduates will have demonstrated							
1. Explain the physics of flight, aerodynamics, and the effects of the atmosphere.							
2. Describe the operation of aircraft systems and how they integrate.							
3. Demonstrate the process of Air Traffic Control and describe the components of the National Airspace System.							
4. Investigate physiological and human factors as they relate to aviation safety.							
5. Accomplish successful academic work in aviation and associated academic disciplines in preparation for professional work in the aviation industry.							

Once completed, a copy of the syllabus for all courses in a given semester should be filed with the Assessment and Accreditation Coordinator by the **3rd week of the semester**. That can be done by either emailing the syllabus to the Assessment & Accreditation Coordinator or by uploading the syllabus to the Syllabi folder on the CAE Accreditation File team, in the appropriate semester folder. All files should follow the following naming convention to allow for easy reference and sorting:

"ABCD 12345 Course Name Syllabus Semester"

Where:

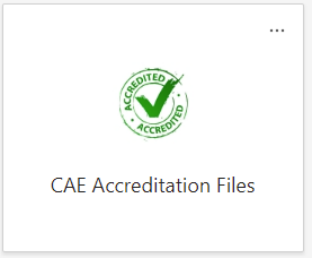
- “ABCD” is the subject code (e.g., AERN, ENGR)
- “12345” is the course number
- “Course Name” is the abbreviated course name (for easy reference)
- “Semester” is the semester for the syllabus (e.g., S23, F25, Sum35)

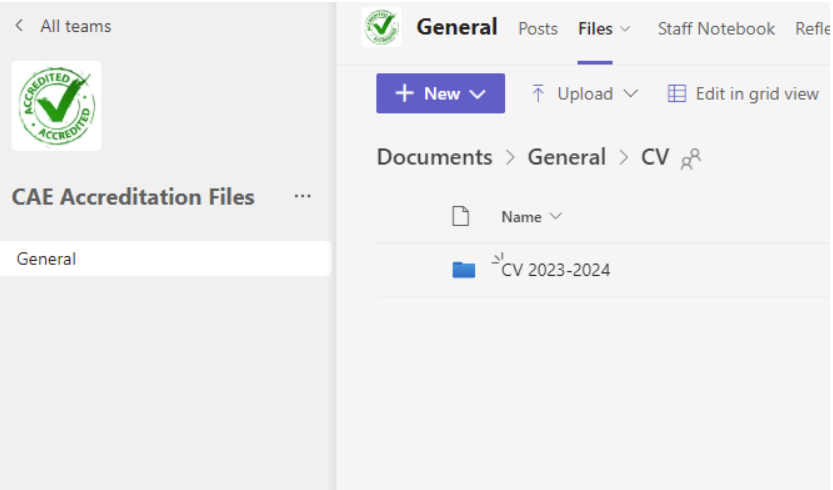


If you should have questions or would like to reference an older syllabus, please contact the Assessment and Accreditation Coordinator.

Curriculum Vitae

Each year your curriculum vitae should be uploaded to the CV folder in the “CAE Accreditation Files” General Channel, utilizing the appropriate academic year folder. The document should be a WORD document. If you should have questions or would like to reference an older curriculum vitae, please contact the Assessment and Accreditation Coordinator.





Program Acronyms
AEST: Aeronautical Studies
ATAM: Air Traffic and Airspace Management
AVMN: Aviation Management
AVMM: Aviation Maintenance Management
PROP: Professional Pilot
UASO: Unmanned Aircraft Systems Flight Operations

Professional Development

The importance of on-going professional development is very important to both Kent State University and our Accreditation Body, AABI. Therefore, faculty should submit their professional development activity in their Workload Statement at the end of the Academic year. The Workload Statement should be submitted to Dr. Joycelyn Harrison, Associate Dean.

Outcome Assessment

Instructors and faculty that teach the courses listed in the Evidence Maps shown in section 4.4 will be responsible for completing their required assessment. This assessment should be a single assignment, which will be assessed based on the grade received on that particular assignment. All instructors should be able to provide a rubric that explains how the grade was assigned. Both the assignment and the rubric should be more-or-less the same from semester to semester to ensure that we are comparing apples to apples when evaluating the assessment data. After each assessment, please provide a copy of the assessment from one student for each major you assessed to the Assessment and Accreditation Coordinator. A complete table of all course assessments is provided below.

Table 30: Master Assessment List

Course Number	Course Name	AEST	ATAM	AVMM	AVMN	PROP	UASO	Assignment (Quiz #, Exam, Lab, etc)
AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT					3		Mid-Term, Final Exam
AERN 25350	FUNDAMENTALS OF AIR TRAFFIC Control	3						Final Exam
AERN 25800	INTRODUCTION TO UNMANNED AIRCRAFT SYSTEMS						2	Final Exam
AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS					3		Ethics Presentation
AERN 35031	AIR TRANSPORTATION INDUSTRY REGULATIONS				1			Final Exam and Research Presentations
AERN 35031	AIR TRANSPORTATION INDUSTRY REGULATIONS				2			Final Exam and Research Presentations
AERN 35250	UNMANNED AIRCRAFT SYSTEMS LAW AND REGULATIONS						3	Final Exam
AERN 35339	FIXED BASE OPERATOR OPERATIONS				1			Final Exam and Research Presentations

AERN 35340	AIRCRAFT SYSTEMS I				1			Final Exam and Research Presentations
AERN 35340	AIRCRAFT SYSTEMS I				2			Final Exam and Research Presentations
AERN 35341	Air Transportation Systems				1			Final Exam and Research Presentations
AERN 35760	COMMERCIAL PILOT THEORY					2		Mock FAA CAX Written
AERN 35810	UNMANNED AIRCRAFT SYSTEMS						1	Final Project
AERN 35830	UNMANNED AIRCRAFT SYSTEMS SENSING AND SENSOR SYSTEMS						1	Final Project
AERN 42799	STRATEGIC AVIATION MAINTENANCE MANAGEMENT CAPSTONE			1				Final Project
AERN 42799	STRATEGIC AVIATION MAINTENANCE MANAGEMENT CAPSTONE			2				Final Project
AERN 42799	STRATEGIC AVIATION MAINTENANCE MANAGEMENT CAPSTONE			3				Final Project
AERN 45010	AIRCRAFT DISPATCH I		2					Dispatch I Final Exam
AERN 45020	AIRCRAFT DISPATCH II		2					FAA ADX Written Exam
AERN 45030	AIRCRAFT SYSTEMS II	2						Exam 1
AERN 45099	AERONAUTICAL STUDIES CAPSTONE	5						Critical Analysis and Report
AERN 45199	AIRPORT OPERATIONS (ELR)				2			Final Exam, Case Study, and Presentation
AERN 45130	PHYSIOLOGY AND HUMAN FACTORS IN AVIATION					2		Final Exam
AERN 45135	AVIATION SAFETY THEORY	4						HFAC Assignments, SMS Assignment
AERN 45135	AVIATION SAFETY THEORY			2				Group Assignment-Boeing, HFACS Assignment, Final Exam
AERN 45135	AVIATION SAFETY THEORY					2		Group Assignment-Boeing, HFACS Assignment
AERN 45150	APPLIED FLIGHT DYNAMICS I	1						Final Exam
AERN 45299	STRATEGIC AVIATION MANAGEMENT (ELR)				3			Project
AERN 45250	AVIATION LAW				1			Final Exam
AERN 45250	AVIATION LAW					3		Chapter 4 Briefs, Chapter 5 and 10 Case Briefs, Final Exam
AERN 45250	AVIATION LAW						3	Final Exam, Case Comment
AERN 45399	AIR TRAFFIC CONTROL CAPSTONE (ELR)		3					Critical Report
AERN 45499	AIR TRAFFIC CONTROL CAPSTONE LABORATORY (ELR)		1					Skills Checks 1, 2, 3

AERN 45648	THEORY OF FLIGHT INSTRUCTION (ELR)					4		FOI and FAA Exams, Private and Commercial Teaching, Review Board
AERN 45720	CREW RESOURCE MANAGEMENT					1		Module 2 and 3 Quizzes
AERN 45791	AVIATION SECURITY AND POLICY SEMINAR					1		Commercial Aviation Operator Security Team Presentation, Midterm Examination
AERN 45791	AVIATION SECURITY AND POLICY SEMINAR						3	Final Paper, Terrorist Simulation
AERN 45800	UNMANNED AIRCRAFT SYSTEMS FLIGHT OPERATIONS THEORY						1	Final Project
AERN 45800	UNMANNED AIRCRAFT SYSTEMS FLIGHT OPERATIONS THEORY						2	Final Project
AERN 45800	UNMANNED AIRCRAFT SYSTEMS FLIGHT OPERATIONS THEORY						3	Final Project
AERN 45800	UNMANNED AIRCRAFT SYSTEMS FLIGHT OPERATIONS THEORY						4	Final Project

Evidence

Rubric

Each faculty/instructor that needs to complete an assessment should have a rubric that is used to assign grades for the assignment. That rubric may be on paper or entered in Canvas depending on the instructor's preference. If the rubric is not on Canvas, it is the instructor's responsibility to maintain copies of the rubric completed for the students. Both the assignment and the rubric should be more-or-less the same from semester to semester to ensure that we are comparing apples to apples when evaluating the assessment data. A copy of the rubrics should be forwarded to the Assessment & Accreditation Coordinator.

In Canvas, regardless of whether or you use a paper or electronic rubric, the instructor shall have at minimum a single line Canvas rubric containing the required Canvas Outcome for the assignment. When entering grades for that assignment, it is the instructor's responsibility to ensure that the appropriate rubric is filled in and saved for each student for that assignment. This allows the College to extract that assessment data into a single spreadsheet for analysis. Below is the scale you can utilize.

ASSESSMENT SCALE

Faculty will use their own rubric to grade assignments; it is the assessment scale that will not change.

INCOMPLETE-0	Unsatisfactory-2	Developing-3	Meets Expectations-4	Exceeds Expectations-5
Did not complete.	Scores less than 50%	Scores less than 75%, but no less than 50%	Scores 75% or Higher	Scores 90% or Higher

Canvas
The universities' use of canvas has helped simplify the grading and accreditation assessment process. Please follow the training link to assist you in uploading your assessment rubrics and assign your assessment evidence (exam, presentation, etc.) Adding Canvas Outcomes to your Course - Kent State University. You may also set-up a training session with the ET Canvas Designer, Megan Smeznik.

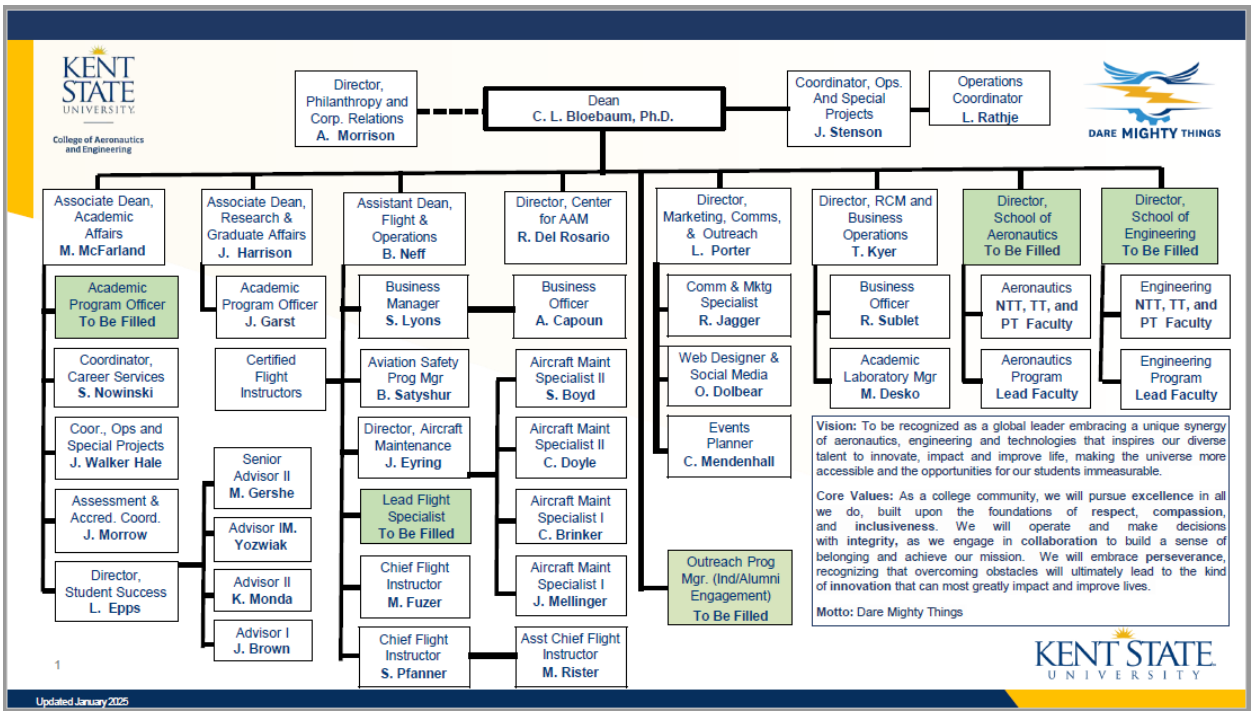
If you are unable to utilize Canvas for the assessment evidence by choosing to utilize a paper copy of the assessment evidence, please forward two pieces of graded evidence for each major (one high grade, one low grade) to the Assessment and Accreditation Coordinator.

Evidence: The evidence (assessment data) will be gathered via Canvas by the Assessment and Accreditation Coordinator. If you decide to utilize a paper format for the assessment, please provide a copy of the assessment and the rubrics from **one student with a high score and one student with a low score for each major** you assessed to the Assessment & Accreditation Coordinator. All assessment data will be evaluated at your Fall Faculty Retreat for potential improvements/changes.

Course Scheduling: All courses are scheduled by the college for the benefit of the student schedule, first, followed by the faculty schedule. This is done in accordance with ABBI guidelines. While we do our best to accommodate changes/requests, our priority is to the student schedule and accreditation guidelines.

Graduate Survey: At the end of each capstone course, a Qualtrics Student Survey will be sent via email to the soon to be graduates. The survey will seek student responses to the AABI programmatic student learning outcomes and Educational Goals. All survey results will be returned to the Assessment & Accreditation Coordinator. An email will be sent to all capstone faculty as a reminder of the availability of the survey to students. We request faculty assistance in reminding students to complete the survey.

Appendix A The Current Table of Organization



Appendix B Laboratory Spaces and Equipment

Aviation Program Laboratories

Laboratory ATB O16, 020, 024, Air Traffic Control Lab (1845 Sq. Ft., capacity 50),
The Air Traffic Control Lab boasts three state-of-the-art labs tailored for hands-on training across all facets of air traffic control. This space houses a $2 million Air Traffic Control (ATC) simulator that is identical to the equipment found in the FAA's training center in Oklahoma City. Training in all three areas of air traffic control is part of our systematic approach to education and professional development. This immersive training ensures comprehensive understanding and prepares students for diverse roles in air traffic control. Students from other aeronautics disciplines also take ATC courses to gain a broader grasp of airspace dynamics.

Equipment:

- Air Traffic Control Simulator

Supported programs: AEST, ATAM, AVMN, PROP

Aeronautics Lab ATB 112 (731 Sq. Ft, Capacity 3)
The Vibration Fundamentals Training System (VFT) is an integrated educational package for teaching/learning the fundamental principles of mechanical vibration as well as engineering mechanics. It provides both a comprehensive hands-on experimental device and an instrumentation package to enhance student understanding of vibration theory. Students can perform virtual experiments using the vibration simulation software and then verify the results with actual experiments thereby reinforcing the learning of difficult principles.

Laboratory AEB 276, XR Research Lab (1096 Sq. Ft, Capacity 13)
The XR Research Lab features 4 virtual reality (VR) stations for students and faculty to explore programs that enhance traditional classroom materials. There are two motion platforms that can be used with X-Plane and Microsoft Flight Simulator as well as similar transportation-centric programs. The XR Research Lab also has augmented reality (AR) and mixed reality (MR) technologies to support additional stations, based on research and teaching requirements.

Equipment:

- 4 Alienware gaming desktop computers
- 2 Alienware gaming laptop computers
- 3 Vivi Pro 2 headsets
- 2 Pico Neo 3 headsets
- 2 motion platforms with generic cockpit setups
- 1 Rift S headset
- 1 HoloLens headset

Supported Programs**:** AEST, PROP, AVMN