

AABInternational

ACCREDITATION CRITERIA MANUAL

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AVIATION ACCREDITATION BOARD INTERNATIONAL

**3410 SKYWAY DRIVE
AUBURN, ALABAMA 36830**

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1.0 INTRODUCTION

This publication describes the criteria used by the Aviation Accreditation Board International (AABI) in the accreditation of associate, baccalaureate and graduate aviation programs and their international equivalent. The criteria, along with the accreditation policies and procedures, serve as the basis to evaluate the quality of the educational program offered and to hold the program accountable to the educational community, the aviation profession and the public. The criteria are written as broad statements that embrace several areas of expected institutional performance. Their purpose is to strengthen aviation programs, elevate the aviation profession by promoting ethical and professional practices, and serve as the field's primary vehicle for quality assurance and self-regulation.

All programs seeking AABI accreditation are expected to meet the criteria presented in this document. Institutions being evaluated for accreditation **MUST** comply with AABI recommendations. Recommendations may be cited for program weaknesses or from failure to comply with a "MUST" statement in the AABI Criteria Manual (Form 201) and/or the AABI Policies & Procedures Manual (Form 225). Program compliance promotes excellent educational practices in the field of aviation and thus enables AABI to grant or reaffirm accreditation.

2.0 ASSOCIATE DEGREE PROGRAMS

It is the responsibility of the institution seeking accreditation of one or more programs to identify the specific AABI program (e.g. Aviation Management, Aviation Maintenance, Aviation Electronics, Aviation Studies, Flight Education, Aviation Safety Science or Air Traffic Control) that applies to each degree program. The title of each institution's program **MUST** be consistent with the name of the applicable AABI program under which accreditation is being sought and the program **MUST** meet the criteria for that AABI program.

The institution may submit a program that includes degree program components such as minors, tracks, options, or concentrations that fall within the scope of another AABI program. In this case, the institution **MUST** show that each minor, track, option, or concentration meets the applicable criteria specified for the selected AABI program. If the institution wishes to have a program with a particular minor, track, option or concentration individually accredited, then it **MUST** submit each minor, track, option, or concentration as a separate program.

It is the responsibility of the institution seeking accreditation of an academic aviation program to demonstrate clearly that the program meets the following criteria.

Criterion 2.1 Students

The quality and performance of the students and graduates are important considerations in the evaluation of an aviation program. The institution **MUST**:

- a. Evaluate, advise, and monitor students to determine its success in meeting program goals.
- b. Have and enforce policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere.
- c. Have and enforce procedures to assure that all students meet all program requirements.
- d. Publish standards for the selection and admission of students which are related to the educational mission and purposes of the institution.
- e. Maintain recent examples of student work, to include examinations, homework problems, laboratory exercises, and reports. These items, **MUST** include the competence of students in both subject matter areas and communications skills.
- f. Assess the effectiveness of its validation methods in granting credit for non-collegiate achievement.
- g. Produce records reflecting the employment or continuing education experience of students graduating from the program during each of the preceding five years.

Criterion 2.2 Program Mission and Educational Goals

The aviation program **MUST** have a mission statement that reflects an educational philosophy, purposes, and general intent, and that clearly complements the institutional mission.

The mission statement **MUST** be published and widely available to the institution's constituents. The administration of the institution **MUST** enable the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission. The aviation program for which an institution seeks accreditation or reaffirmation **MUST** have in place:

- a. Detailed published educational goals that are consistent with the mission of the institution and these criteria.
- b. A process based on the needs of the program's various constituencies in which the goals are determined and periodically evaluated.
- c. A curriculum and process that ensures the achievement of these goals.
- d. A recurring system of evaluation that demonstrates achievement of these goals and uses the results to improve the effectiveness of the program.

Criterion 2.3 Student Learning Outcomes

2.3.1 General. Associate degree programs in aviation **MUST** demonstrate that their graduates are able to:

- a. apply mathematics to aviation-related disciplines;
- b. identify, formulate, and solve applied aviation problems;
- c. work effectively on multi-disciplinary and diverse teams;
- d. make professional and ethical decisions;
- e. communicate effectively, using both written and oral communication skills;
- f. engage in and recognize the need for and life-long learning;
- g. assess contemporary issues;
- h. use the techniques, skills and modern tools in aviation for professional practice.

2.3.2 Aviation Core. Aviation programs **MUST** demonstrate that their graduates are able to:

1. Describe the professional attributes, requirements or certifications, and planning applicable to aviation careers.
2. Describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems.
3. Evaluate aviation safety and the impact of human factors on safety.
4. Discuss the impact of national and international aviation law, regulations and labor issues on aviation operations.

5. Explain the integration of airports, airspace, and air traffic control in managing the National Airspace System.
6. Discuss the impact of meteorology and environmental issues on aviation operations.

2.3.3 Program Criteria. Each program **MUST** develop outcomes appropriate to satisfy applicable AABI program-specific criteria (see Criterion 5.0).

2.3.4 Other. Outcomes may be developed as appropriate to satisfy additional program, institutional and/or other accrediting body requirements.

Criterion 2.4 Curriculum

The curriculum requirements specify components appropriate to aviation subjects but do not prescribe specific courses. The faculty **MUST** assure that the program curriculum specifies outcomes as identified in Criterion 2.3, consistent with the mission and goals of the program and institution. The institution **MUST** assure that student learning in the classroom is well integrated with learning in the associated laboratory for aviation courses. The curriculum **MUST** include:

- a. College level mathematics and basic sciences appropriate to the program.
- b. General education that complements the technical contents of the curriculum and are consistent with the program and institution objectives.
- c. Components that satisfy AABI program-specific criteria.

Criterion 2.5 Faculty and Staff

Full-time and adjunct faculty directly involved in an aviation program **MUST** meet at least the minimum standards for academic credentials specified by the institution and required by the regional or national accrediting agency. The faculty **MUST** be of sufficient number as determined by student enrollment and the expected outcomes of the program. The aviation unit **MUST** have at least one dedicated full-time faculty member. Faculty **MUST** engage in teaching and service. Flight instructional, and other laboratory staff, not holding full-time faculty appointments and rank are not considered faculty for the purposes of this section.

The institution **MUST** demonstrate an appropriate mix of full-time and adjunct faculty necessary to fulfill its stated program outcomes.

2.5.1 Qualifications. The mission of a particular aviation program will directly affect the makeup of the faculty who participate in the program. The faculty **MUST** have sufficient qualifications to develop, guide,

deliver, evaluate, and improve the program. The overall qualifications of the faculty may include such factors as education, diversity of backgrounds, applicable experience, teaching performance, ability to communicate, enthusiasm for developing more effective programs, participation in professional societies, and applicable certifications, registrations or licenses.

2.5.2 Recruitment and Selection. Recruitment and selection of faculty members **MUST** be consistent with institutional, regional, and national mandates.

2.5.3 Rank, Promotion, and Tenure. Opportunities for appointment at all institutional ranks, as well as opportunities for promotion and tenure (for tenure-track faculty), **MUST** be available for full-time aviation faculty members consistent with those for full-time faculty across other units of the institution. In addition, the uniqueness of the professional qualifications required for participation in the many facets of collegiate aviation **MUST** be considered when making these judgments.

2.5.4 Salaries and Working Conditions. Salaries for aviation faculty **MUST** fall into the same ranges as those offered to other faculty members of the institution in comparable disciplines. Aviation faculty teaching loads **MUST** be in accordance with the institution's standards.

2.5.5 Support Personnel. The administration **MUST** provide for an adequate number and quality of support staff. An adequate number of technical, flight and ground instructors whose academic credentials are consistent with the needs of the program **MUST** be available. Support personnel **MUST** also have proper certification and/or appropriate experience for the program.

2.5.6 Faculty and Instructional Staff Evaluation. Institutions **MUST** have a process for faculty evaluation to include all full-time and adjunct aviation faculty.

Ongoing evaluations of all full-time aviation faculty members, along with appropriate follow-up actions where necessary, **MUST** ensure teaching effectiveness, service accountability, and lead to continued program improvement.

2.5.7 Faculty Development. All full-time and adjunct faculty members **SHOULD** be encouraged to further their professional academic development, thus enhancing their individual contributions to the institution, the program, and the students. Professional development of aviation faculty includes opportunities available to all faculty and also those which may be unique to the aviation field.

Examples of acceptable and desirable forms of faculty development include but are not limited to:

- Acquisition of advanced degrees;
- Acquisition of advanced aviation certification;
- Membership and participation in professional aviation associations;
- Participation in community, regional, and national aviation functions;
- Cooperative efforts with area schools in furthering aviation education faculty exchange programs;
- Sabbatical and/or professional development leaves.

Criterion 2.6 Facilities, Equipment and Services

Classrooms, laboratories, and associated equipment **MUST** be adequate to accomplish the program goals and provide an atmosphere conducive to learning. Appropriate facilities **MUST** be available to foster faculty-student interaction and to create a climate that encourages professional development and professional activities. Programs **MUST** provide opportunities for students to learn the use of modern applicable instruments and equipment. Computing and information infrastructures **MUST** be in place to support the scholarly activities of the students and faculty and the educational goals of the institution. The quality of off-campus aviation courses at remote facilities or airport locations **MUST** be maintained at least to the level of on-campus courses.

2.6.1 Laboratory Facilities. The size of an institution, the scope and emphasis of its academic program, and its declared purposes and goals are factors to be taken into account with respect to facilities and equipment considerations. Certain programs in aviation require substantial laboratory and classroom facilities to serve the objectives of the program. Laboratory equipment, computers, etc., **MUST** be appropriate to the program goals and **SHOULD** be the type encountered in industry and practice. Support and instructional personnel **MUST** be provided to implement and maintain the laboratory component of the program. Pre- and post-briefing rooms **SHOULD** afford privacy and **MUST** be sufficient in number to handle the instructor-student pairs using the facility at any one time.

2.6.2 Flight Equipment. Careful consideration **MUST** be given to the number of aircraft available to ensure that students can complete the program in a reasonable period of time. The institution **MUST** provide an adequate number of safe, reliable, and appropriately equipped and maintained aircraft to satisfy program goals.

2.6.3 Library. Access to appropriate reference materials **MUST** be adequate for the aviation program(s).

Criterion 2.7 Institutional Structure and Support

Institutional structure, support, financial resources, and constructive leadership **MUST** be adequate to assure the quality and continuity of the associate degree program in aviation. Resources **MUST** be sufficient to attract, retain, and provide for continued professional development of a well-qualified faculty. Resources also **MUST** be sufficient to acquire, maintain, and operate facilities and equipment appropriate for the program. In addition, support personnel and institutional services **MUST** be adequate to meet program needs.

Criterion 2.8 Aviation Safety Culture and Program

To foster an effective safety culture, the institution **MUST** have and use a verifiable formal aviation safety program that involves students, faculty and staff for operations involving flight, maintenance, avionics and other aviation laboratories. The institution's aviation safety program **MUST** incorporate SMS key components appropriate to its national regulators' guidance and institution size and scope, and **SHOULD** be coordinated with the institution's overall safety program.

Criterion 2.9 Relations with Industry

There **MUST** be evidence of a relationship between the aviation program and the practicing professionals in the industry. The aviation faculty **MUST** develop and evaluate each program with advice from appropriate industry associations and/or professionals in the field.

Criterion 2.10 Continuous Assessment and Improvement

Each program **MUST** have an assessment process that includes a written plan with documented results. This process **MUST** incorporate relevant evidence used to regularly assess the program. The results of the assessment **MUST** be used to effect continuous improvement of the program.

2.10.1 Comprehensive Assessment Plan. The comprehensive assessment plan and process **MUST** address:

1. Students
2. Program Mission and Educational Goals
3. Student Learning Outcomes
4. Curriculum
5. Faculty and Staff
6. Facilities, Equipment and Services
7. Institutional Structure and Support
8. Aviation Safety Culture and Program (if required under Criterion 2.8)
9. Relations with Industry

2.10.2 Assessment Plan and Process. The assessment plan and process **MUST** include:

1. Timelines, metrics and responsibilities for the assessment process.
2. Evidence and how it is collected and analyzed.
3. How the assessment results are used to improve program effectiveness.

Criterion 2.11 Complementary Degree Programs

Complementary degree programs involve two or more institutions working together to offer a degree program, and the degree granting institution does not offer all elements of the program. In these circumstances the following criteria **MUST** be met:

2.11.1 **Unit Offering Degree.** The academic unit offering the degree program **MUST** be clearly and distinctly identified with an aviation orientation.

2.11.2 **Students Transferring.** If the degree granting institution accepts students from other than the complementary programs, then these students **MUST** be enrolled in a separately-designated program.

Criterion 2.12 Credit for Non-Collegiate Achievement

For credits that are neither covered by articulation agreements nor determined by the degree granting institution to be substantially similar to courses it offers at the lower-division level, the degree granting institution **MUST** establish validation procedures if advanced placement, waiving of requirements, or granting of credit for experience is offered. Each institution **MUST** maintain published non-collegiate credit policies and adequate records to evaluate the effectiveness of the validation techniques used.

2.12.1 **Credit for Aviation Credentials.** Entering students who have aviation credentials may elect to challenge the appropriate courses. Institutions which recognize aviation credentials as a measure of requisite knowledge, skill, and experience **MUST** establish validation procedures to ensure that the student meets or exceeds the standards of the institution's courses. The validation procedures **MUST** include documentation of the student's competency appropriate to the aviation credentials held.

3.0 BACCALAUREATE DEGREE PROGRAMS

In order to be considered for accreditation, collegiate aviation programs **MUST** be designed to prepare graduates to function as aviation professionals.

It is the responsibility of the institution seeking accreditation of one or more programs to identify the specific AABI program (e.g. Aviation Management, Aviation Maintenance, Aviation Electronics, Aviation Studies, Flight Education, Aviation Safety Science or Air Traffic Control) that applies to each degree program. The title of each institution's program **MUST** be consistent with the name of the applicable AABI program under which accreditation is being sought and the program **MUST** meet the criteria for that AABI program.

The institution may submit a program that includes degree program components such as minors, tracks, options, or concentrations that fall within the scope of another AABI program. In this case, the institution **MUST** show that each minor, track, option, or concentration meets the applicable criteria specified for the selected AABI program. If the institution wishes to have a program with a particular minor, track, option or concentration individually accredited, then it **MUST** submit each minor, track, option, or concentration as a separate program.

It is the responsibility of the institution seeking accreditation of an aviation program to demonstrate clearly that the program meets the following criteria.

Criterion 3.1 Students

The quality and performance of the students and graduates are important considerations in the evaluation of an aviation program. The institution **MUST**:

- a. Evaluate, advise, and monitor students to determine its success in meeting program goals.
- b. Have and enforce policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere.
- c. Have and enforce procedures to assure that all students meet all program requirements.
- d. Publish standards for the selection and admission of students which are related to the educational mission and purposes of the institution.
- e. Maintain recent examples of student work, to include examinations, homework problems, laboratory exercises and reports. These items will include evidence of student competence in both subject matter areas and communications skills.
- f. Assess the effectiveness of its validation methods in granting credit for non-collegiate achievement.
- g. Produce records reflecting the employment or continuing education experience of students graduating from the program during each of the preceding five years.

Criterion 3.2 Program Mission and Educational Goals

The aviation program **MUST** have a mission statement that reflects an educational philosophy, purposes, and general intent, and that clearly complements the institutional mission.

The mission statement **MUST** be published and widely available to the institution's constituents. The administration of the institution **MUST** enable the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission. The aviation program for which an institution seeks accreditation or reaffirmation **MUST** have in place:

- a. Published educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution and these criteria.
- b. A process based on the needs of the programs' various constituencies in which the goals are determined and periodically evaluated.
- c. A curriculum and process that ensure the achievement of these goals.
- d. A recurring system of evaluation that demonstrates achievement of these goals and uses the results to improve the effectiveness of the program.

Criterion 3.3 Student Learning Outcomes

3.3.1 General. Aviation programs **MUST** demonstrate that graduates are able to:

- a. apply mathematics, science, and applied sciences to aviation-related disciplines;
- b. analyze and interpret data;
- c. work effectively on multi-disciplinary and diverse teams;
- d. make professional and ethical decisions;
- e. communicate effectively, using both written and oral communication skills;
- f. engage in and recognize the need for life-long learning;
- g. assess contemporary issues;
- h. use the techniques, skills, and modern technology necessary for professional practice;
- i. assess the national and international aviation environment;
- j. apply pertinent knowledge in identifying and solving problems;
- k. apply knowledge of business sustainability to aviation issues.

3.3.2 Aviation Core. Aviation programs **MUST** demonstrate that their graduates are able to:

1. Describe the professional attributes, requirements or certifications, and planning applicable to aviation careers.
2. Describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems.

3. Evaluate aviation safety and the impact of human factors on safety.
4. Discuss the impact of national and international aviation law, regulations and labor issues on aviation operations.
5. Explain the integration of airports, airspace, and air traffic control in managing the National Airspace System.
6. Discuss the impact of meteorology and environmental issues on aviation operations.

3.3.3 Program Criteria. Each program **MUST** develop outcomes appropriate to satisfy applicable AABI program-specific criteria (see Criterion 5.0)

3.3.4 Other. Outcomes may be developed as appropriate to satisfy additional program, institutional and/or other accrediting body requirements.

Criterion 3.4 Curriculum

The curriculum requirements specify components appropriate to aviation programs, but do not prescribe specific courses. The program's faculty **MUST** ensure that the aviation curriculum specifies outcomes as identified in Criterion 3.3, consistent with the mission and goals of the program and institution. Students **MUST** be prepared for careers in aviation and aerospace through the curriculum culminating in comprehensive projects or experiences based on the cumulative knowledge and skills acquired in earlier course work. The institution **MUST** assure that student learning in the classroom is well integrated with learning in the associated laboratory for aviation courses. The curriculum **MUST** include:

- a. College level mathematics and basic sciences appropriate to the program.
- b. General education components that complement the technical content of the curriculum and are consistent with the program and institution mission and goals.
- c. Components that satisfy AABI program-specific criteria.

Criterion 3.5 Faculty and Staff

Full-time and adjunct faculty directly involved in an aviation program **MUST** meet at least the minimum standards for academic credentials specified by the institution and required by the regional or national accrediting agency. The faculty **MUST** be of sufficient number as determined by student enrollment and the expected outcomes of the program. Each program **MUST** have at least one dedicated full-time faculty member. Faculty **MUST** engage in teaching, service, and scholarship. Flight instructional, and other laboratory staff, not holding full-

time faculty appointments and rank are not considered faculty for the purposes of this section.

The institution **MUST** demonstrate an appropriate mix of full-time and adjunct faculty necessary to fulfill its stated program outcomes.

3.5.1 Qualifications. The mission of a particular aviation program will directly affect the makeup of the faculty who participate in the program. The faculty **MUST** have sufficient qualifications to develop, guide, deliver, evaluate, and improve the program. The overall qualifications of the faculty may include such factors as education, diversity of backgrounds, applicable experience, teaching performance, ability to communicate, enthusiasm for developing more effective programs, level of scholarship, participation in professional societies, and applicable certifications, registrations, or licenses.

3.5.2 Recruitment and Selection. Recruitment and selection of faculty members **MUST** be consistent with institutional, regional, and national mandates. Candidates **SHOULD** be sought with degree(s) from other than the parent institution to encourage a cross-fertilization of ideas and maintenance of high quality program standards.

3.5.3 Rank, Promotion and Tenure. Opportunities for appointment at all institutional ranks, as well as opportunities for promotion and tenure (for tenure-track faculty), **MUST** be consistent with those for full-time faculty across other units of the institution. In addition, the uniqueness of the professional qualifications required for participation in the many facets of collegiate aviation **MUST** be considered when making these judgments.

3.5.4 Salaries and Working Conditions. Salaries for aviation faculty **MUST** fall into the same ranges as those offered to other faculty members of the institution in comparable disciplines. Aviation faculty teaching loads **MUST** be in accordance with the institution's standards.

3.5.5 Support Personnel. The administration **MUST** provide for an adequate number and quality of support staff. An adequate number of technical, flight and ground instructors whose academic credentials are consistent with the needs of the program **MUST** be available. Support personnel **MUST** also have proper certification and/or appropriate experience for the program.

3.5.6 Faculty and Instructional Staff Evaluation. Institutions **MUST** have a process for faculty evaluation to include all full-time and adjunct aviation faculty.

Ongoing evaluations of all full-time aviation faculty, along with appropriate follow-up actions where necessary, **MUST** ensure teaching effectiveness, service accountability, professional development and scholarship and lead to continued program improvement.

3.5.7 Faculty Development. All institutions **MUST** have a policy that supports active faculty development. All full-time and adjunct faculty members **SHOULD** be encouraged to further their professional academic development, thus enhancing their individual contributions to the institution, the program, and the students. Professional development of aviation faculty includes opportunities available to all faculty and also those which may be unique to the aviation field.

Examples of acceptable and desirable forms of faculty development include but are not limited to:

- Acquisition of advanced degrees;
- Acquisition of advanced aviation certification;
- Membership and participation in professional aviation associations;
- Participation in community, regional, and national aviation functions;
- Cooperative efforts with area schools in furthering aviation education faculty exchange programs;
- Sabbatical and/or professional development leaves.

Criterion 3.6 Facilities, Equipment, and Services

Classrooms, laboratories, and associated equipment **MUST** be adequate to accomplish the program goals and provide an atmosphere conducive to learning. Appropriate facilities **MUST** be available to foster faculty-student interaction and to create a climate that encourages professional development and professional activities. Programs **MUST** provide opportunities for students to learn the use of modern applicable instruments and equipment. Computing and information infrastructures **MUST** be in place to support the scholarly activities of the students and faculty and the educational goals of the institution. The quality of off-campus aviation courses at remote facilities or airport locations **MUST** be maintained at least to the level of on-campus courses.

3.6.1 Laboratory Facilities. The size of an institution, the scope and emphasis of its academic program, and its declared purposes and goals are factors to be taken into account with respect to facilities and equipment considerations. Certain programs in aviation require substantial laboratory and classroom facilities to serve the objectives of both teaching and research. Laboratory equipment, computers, etc., **MUST** be appropriate to the program goals and **SHOULD** be the type encountered in industry and practice. Support and instructional personnel **MUST** be provided to

implement and maintain the laboratory component of the program. Pre- and post-briefing rooms SHOULD afford privacy and MUST be sufficient in number to handle the instructor-student pairs using the facility at any one time.

3.6.2 Flight Equipment. Careful consideration MUST be given to the number of aircraft available to ensure that students can complete the program in a reasonable period of time. The institution MUST provide an adequate number of safe, reliable, and appropriately equipped and maintained aircraft to satisfy program goals.

3.6.3 Library. Access to appropriate reference materials MUST be adequate for the aviation program(s).

Criterion 3.7 Institutional Structure and Support

Institutional structure, support, financial resources, and constructive leadership MUST be adequate to assure the quality and continuity of the aviation program throughout the period of accreditation. Resources MUST be sufficient to attract, retain, and provide for continued professional development of a well-qualified faculty. Resources MUST be sufficient to acquire, maintain, and operate facilities and equipment appropriate for the aviation program. In addition, support personnel and institutional services MUST be adequate to meet the program needs.

Criterion 3.8 Aviation Safety Culture and Program

To foster an effective safety culture, the institution MUST have and use a verifiable formal aviation safety program that involves students, faculty and staff for operations involving flight, maintenance, avionics and other aviation laboratories. The institution's aviation safety program MUST incorporate SMS key components appropriate to its national regulators' guidance and institution size and scope, and SHOULD be coordinated with the institution's overall safety program.

Criterion 3.9 Relations with Industry

There MUST be evidence of a relationship between the aviation program and the practicing professionals in the industry. The aviation faculty MUST develop and evaluate each program with advice from appropriate industry associations and/or professionals in the field.

Criterion 3.10 Continuous Assessment and Improvement

Each program MUST have an assessment process that includes a written plan with documented results. This process MUST incorporate relevant evidence used to regularly assess the program. The results of the assessment MUST be used to effect continuous improvement of the program.

3.10.1 Comprehensive Assessment Plan. The comprehensive assessment plan and process **MUST** address:

1. Students
2. Program Mission and Educational Goals
3. Student Learning Outcomes
4. Curriculum
5. Faculty and Staff
6. Facilities, Equipment and Services
7. Institutional Structure and Support
8. Aviation Safety Culture and Program (if required under Criterion 3.8)
9. Relations with Industry

3.10.2 Assessment Plan and Process. The assessment plan and process **MUST** include:

1. Timelines, metrics and responsibilities for the assessment process.
2. Evidence and how it is collected and analyzed.
3. How the assessment results are used to improve program effectiveness.

Criterion 3.11 Complementary Degree Programs

Complementary degree programs involve two or more institutions working together to offer a degree program, and the degree granting institution does not offer all elements of the program. In these circumstances the following criteria **MUST** be met:

3.11.1 Unit Offering Degree. The academic unit offering the degree program must be clearly and distinctly identified with an aviation orientation.

3.11.2 Students Transferring. If the degree granting institution accepts students from other than the complementary programs, these students must be enrolled in a separately designated program.

Criterion 3.12 Credit for Non-Collegiate Achievement

For credits that are neither covered by articulation agreements nor determined by the degree granting institution to be substantially similar to courses it offers at the lower-division level, the degree granting institution **MUST** establish validation procedures if advanced placement, waiving of requirements, or granting of credit for experience is offered. Each institution **MUST** maintain published non-collegiate credit policies and adequate records to evaluate the effectiveness of the validation techniques used.

3.12.1 Credit for Aviation Credentials. Entering students who have aviation credentials may elect to challenge the appropriate courses.

Institutions which recognize aviation credentials as a measure of requisite knowledge, skill, and experience **MUST** establish validation procedures to ensure that the student meets or exceeds the standards of the institution's courses. The validation procedures **MUST** include documentation of the student's competency appropriate to the aviation credentials held.

4.0 GRADUATE DEGREE PROGRAMS

In order to be considered for accreditation, collegiate graduate aviation programs **MUST** be designed to prepare graduates to function as aviation professionals. Each master's level program must require a minimum of one year or 30 graduate credit hours of study beyond the baccalaureate-level, consisting of courses with increased depth and rigor. Each doctoral level program must require a minimum of three years or 90 graduate credit hours of study beyond the baccalaureate level with depth and rigor increased beyond the master's level.

It is the responsibility of the institution seeking accreditation of one or more programs to identify the specific AABI Program area that applies to each degree program. The institution **MUST** show that each track, option, or concentration meets the applicable criteria specified for the selected AABI Program.

It is the responsibility of the institution seeking accreditation of an aviation program to demonstrate clearly that the program meets the following criteria.

Criterion 4.1 Students

The quality and performance of the students and graduates are important considerations in the evaluation of an aviation program. The institution **MUST**:

- a. Evaluate, advise, and monitor students to determine its success in meeting program objectives
- b. Have and enforce policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere
- c. Have and enforce procedures to assure that all students meet all program requirements
- d. Publish standards for the selection and admission of students which are related to the educational mission and purposes of the institution. These standards will require the applicant to hold an earned baccalaureate degree program that prepares them to successfully complete aviation courses at the masters and doctoral level. Exceptions may be admitted with an individually documented plan of study to compensate for any deficiencies.
- e. Admitted students must hold an earned baccalaureate that prepares them to apply the basic principles of college-level mathematics and science. Exceptions may be admitted with an individually documented plan of study to compensate for any deficiencies.
- f. Maintain recent examples of student work, to include examinations, homework problems, laboratory exercises, and reports. These items will include evidence of student competence in both subject matter areas and communications skills
- g. Assess the effectiveness of its validation methods in granting credit for non-collegiate achievement

Criterion 4.2 Program Mission and Educational Goals

The aviation program **MUST** have a mission statement that reflects an educational philosophy, purposes, and general intent, and that clearly complements the institutional mission as appropriate to the institution.

The mission statement **MUST** be published and widely available to the institution's constituents. The administration of the institution **MUST** enable the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission. The aviation program for which an institution seeks accreditation or reaffirmation **MUST** have in place:

- a. Published educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution and these criteria.
- b. A process based on the needs of the programs' various constituencies in which the goals are determined and periodically evaluated.
- c. A curriculum and process that ensure the achievement of these goals.
- d. A recurring system of ongoing evaluation that demonstrates achievement of these goals and uses the results to improve the effectiveness of the program.

Criterion 4.3 Student Learning Outcomes

4.3.1 GENERAL. Aviation programs **MUST** demonstrate that graduates have completed studies beyond the basic levels and are able to :

- a. apply mathematics, science, and applied sciences to aviation-related disciplines at the master's or doctoral level, including an adequate foundation in statistics;
- b. analyze and interpret data at the master's or doctoral level;
- c. work effectively on multi-disciplinary and diverse teams;
- d. make professional and ethical decisions;
- e. communicate effectively, using both written and oral communication skills;
- f. engage in and recognize the need for life-long learning;
- g. assess contemporary issues;
- h. use the techniques, skills, and modern technology necessary for professional practice;
- i. assess the national and international aviation environment;
- j. apply pertinent knowledge in identifying and solving problems;
- k. apply knowledge of business sustainability to aviation issues;
- l. apply advanced qualitative and quantitative problem-solving skills.

4.3.2 Program Criteria. Each program **MUST** develop outcomes appropriate to satisfy applicable AABI program-specific criteria (see Criterion 5.9)

4.3.3 Other. Outcomes may be developed as appropriate to satisfy additional program, institutional and/or other accrediting body requirements.

Criterion 4.4 Curriculum

The curriculum requirements specify components appropriate to graduate aviation programs, but do not prescribe specific courses. The program's faculty **MUST** ensure that the aviation curriculum specifies outcomes as identified in Criterion 4.3, consistent with the mission and goals of the program and institution. Students **MUST** be prepared for careers in aviation, aerospace, and related disciplines through the curriculum culminating in comprehensive projects or experiences based on the cumulative knowledge and skills acquired in earlier course work. The institution **MUST** assure that student learning is well integrated with learning appropriate to the degree sought. The curriculum **MUST** address:

- a. Graduate level mathematics and basic sciences appropriate to the program
- b. Outcomes appropriate to the graduate program-specific criteria

Criterion 4.5 Faculty and Staff

Full-time and adjunct faculty directly involved in a graduate aviation program **MUST** meet at least the minimum standards for academic credentials specified by the institution and required by the regional or national accrediting agency. The faculty **MUST** be of sufficient number as determined by student enrollment and the expected outcomes of the program. The institution **MUST** designate at least one full-time faculty member or administrator with faculty rank to manage and oversee each graduate program. Faculty **MUST** engage in teaching, service, and scholarship.

The institution **MUST** demonstrate an appropriate mix of full-time and adjunct faculty necessary to fulfill its stated program outcomes.

4.5.1 **Qualifications.** The mission of a particular aviation program will directly affect the makeup of the faculty who participate in the program. The faculty **MUST** have sufficient qualifications to develop, guide, deliver, evaluate, and improve the program. The qualifications of graduate aviation faculty will include factors such as education, academic credentials, applicable experience and scholarship. The minimum academic qualification for graduate aviation faculty **MUST** be an earned doctorate degree.

4.5.2 **Recruitment and Selection.** Recruitment and selection of faculty members **MUST** be consistent with institutional, regional, and national mandates. Candidates **SHOULD** be sought with degree(s) from other than

the parent institution to encourage a cross-fertilization of ideas and maintenance of high quality program standards.

4.5.3 Rank, Promotion and Tenure. Opportunities for appointment at all institutional ranks, as well as opportunities for promotion and tenure (for tenure-track faculty), **MUST** be consistent with those for full-time faculty across other units of the institution. In addition, the uniqueness of the professional qualifications required for participation in the many facets of collegiate aviation **MUST** be considered when making these judgments.

4.5.4 Salaries and Working Conditions. Salaries for aviation faculty **MUST** fall into the same ranges as those offered to other faculty members of the institution in comparable disciplines. Aviation faculty teaching loads **MUST** be in accordance with the institution's standards.

4.5.5 Support Personnel. The administration **MUST** provide for an adequate number and quality of support staff.

4.5.6 Faculty and Staff Evaluation. Institutions **MUST** have a process for faculty evaluation to include all graduate faculty whether full-time or adjunct.

Ongoing evaluations of all full-time aviation graduate faculty, along with appropriate follow-up actions where necessary, **MUST** ensure teaching and research effectiveness, service accountability, professional development and scholarship and lead to continued program improvement.

4.5.7 Faculty Development. All institutions **MUST** have a policy that supports active faculty development. All full-time and adjunct faculty members **SHOULD** be encouraged to further their professional academic development, thus enhancing their individual contributions to the institution, the program, and the students. Professional development of aviation faculty includes opportunities available to all faculty and also those which may be unique to the aviation field.

Examples of acceptable and desirable forms of faculty development include but are not limited to:

- Acquisition of advanced degrees;
- Acquisition of advanced aviation certification;
- Membership and participation in professional aviation associations;
- Participation in community, regional, and national aviation functions;
- Cooperative efforts with area schools in furthering aviation education faculty exchange programs;
- Sabbatical and/or professional development leaves.

Criterion 4.6 Facilities, Equipment, and Services

Classrooms, laboratories, and associated equipment **MUST** be adequate to accomplish the program objectives and provide an atmosphere conducive to learning. Appropriate facilities **MUST** be available to foster faculty-student interaction and to create a climate that encourages professional development and professional activities. Programs **MUST** provide opportunities for students to learn all elements of the program appropriate to the degree sought. Computing and information infrastructures **MUST** be in place to support the scholarly activities of the students and faculty and the educational objectives of the institution. The quality of off-campus aviation courses at remote facilities or airport locations **MUST** be maintained at least to the level of on-campus courses.

4.6.1 Laboratory Facilities and Equipment. The size of an institution, the scope and emphasis of its academic program, and its declared purposes and objectives are factors to be taken into account with respect to facilities and equipment considerations. Certain programs in aviation require substantial laboratory and classroom facilities to serve the objectives of both teaching and research. Laboratory equipment **MUST** be appropriate to the program objectives and **SHOULD** be the type encountered in industry and practice. Support and instructional personnel **MUST** be provided to implement and maintain the laboratory component of the program. Pre- and post-briefing rooms **SHOULD** afford privacy and **MUST** be sufficient in number to handle the instructor-student pairs using the facility at any one time.

4.6.2 Library. Access to appropriate reference materials **MUST** be adequate for the aviation program(s).

Criterion 4.7 Institutional Structure and Support

Institutional support, financial resources, and constructive leadership **MUST** be adequate to assure the quality and continuity of the aviation program throughout the period of accreditation. Resources **MUST** be sufficient to attract, retain, and provide for continued professional development of a well-qualified faculty. Resources **MUST** be sufficient to acquire, maintain, and operate facilities and equipment appropriate for the aviation program. In addition, support personnel and institutional services **MUST** be adequate to meet the program needs.

Criterion 4.8 Aviation Safety Culture and Program

To foster an effective safety culture, the institution **MUST** have and use a verifiable formal aviation safety program that involves students, faculty and staff for operations involving flight, maintenance, avionics and other aviation laboratories. The institution's aviation safety program **MUST** incorporate SMS key components appropriate to its national regulators' guidance and institution size and scope, and **SHOULD** be coordinated with the institution's overall safety program.

Criterion 4.9 Relations with Industry

There **MUST** be evidence of a relationship between the aviation program and the practicing professionals in the industry. The aviation faculty **MUST** develop and evaluate each program with advice from appropriate industry associations and/or professionals in the field.

Criterion 4.10 Continuous Assessment and Improvement

Each program **MUST** have an assessment process that includes a written plan with documented results. This process **MUST** incorporate relevant evidence used to regularly assess the program. The results of the assessment **MUST** be used to effect continuous improvement of the program.

4.10.1 Comprehensive Assessment Plan. The comprehensive assessment plan and process **MUST** address:

1. Students
2. Program Mission and Educational Goals
3. Student Learning Outcomes
4. Curriculum
5. Faculty and Staff
6. Facilities, Equipment and Services
7. Institutional Structure and Support
8. Aviation Safety Culture and Program (if required under Criterion 4.8)
9. Relations with Industry

4.10.2 Assessment Plan and Process. The assessment plan and process **MUST** include:

1. Timelines, metrics and responsibilities for the assessment process.
2. Evidence and how it is collected and analyzed.
3. How the assessment results are used to improve program effectiveness.

Criterion 4.11 Complementary Degree Programs

Complementary degree programs involve two or more institutions working together to offer a degree program, and the degree granting institution does not offer all elements of the program. In these circumstances the following criteria **MUST** be met:

4.11.2 Unit Offering Degree. The academic unit offering the degree program must be clearly and distinctly identified with an aviation orientation.

4.11.3 Students Transferring. If the degree granting institution accepts students from other than the complementary programs, these students must be enrolled in a separately designated program.

Criterion 4.12 Credit for Non-Collegiate Achievement

For credits that are neither covered by articulation agreements nor determined by the degree granting institution to be substantially similar to courses it offers at the lower-division level, the degree granting institution **MUST** establish validation procedures if advanced placement, waiving of requirements, or granting of credit for experience is offered. Validation techniques such as standardized and/or locally prepared examinations, successful completion of advanced courses in the institution, and interviews may be used to meet this criterion. Each institution **MUST** maintain published non-collegiate credit policies and adequate records to evaluate the effectiveness of the validation techniques used.

5.0 PROGRAM CRITERIA

5.1 Program Criteria for Aviation Management

These criteria apply to Aviation Management and similarly named applied programs such as: Air Carrier Management, Airway Science Management, Airport Management, Flight Operations Management and Maintenance Management.

5.1.1 Associate Programs. An Aviation Management program **MUST** prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program may be oriented toward a segment of the industry, such as airlines, general aviation or airports; or toward a specific area, such as flight operations management or aircraft maintenance management, or may be of a general nature. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

5.1.2 Baccalaureate Programs. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills and attitudes to competently and ethically function as a manager in the aviation industry. Each program may be oriented toward a segment of the industry, such as airlines, general aviation or airports; or towards a specific area, such as flight operations management or aircraft maintenance management, or may be of a general nature. Additionally, each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

Each program **MUST** provide evidence of a significant culminating upper division experience in aviation management. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.2 Program Criteria for Aviation Maintenance

These criteria apply to Aviation Maintenance and similarly named applied programs such as: Aviation Maintenance/Manufacturing, Aeronautical Technology and Airway Science Maintenance.

5.2.1 Associate Programs. An Aviation Maintenance Technology program **MUST** prepare the graduate for a position in the aviation maintenance industry or transfer to a baccalaureate degree program. Classroom and laboratory topics **MUST** lead to appropriate national

certification as an Aviation Maintenance Technician with airframe and/or powerplant ratings, or national equivalent. The focus of the program MUST be oriented toward a segment of the aviation industry, such as air carriers or general aviation; or toward a specific area, such as electronics, materials, propulsion, or logistics. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

5.2.2 Baccalaureate Programs. Each program MUST provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as a maintenance professional in the aviation industry.

An Aviation Maintenance program is designed to prepare the graduate for a position in aviation maintenance or manufacturing. Classroom and laboratory topics MUST lead to appropriate national certification. The program goals MUST include certification/licensure as an Aviation Maintenance Technician with airframe and/or powerplant ratings, or national equivalent. It is anticipated that many schools will develop a single aviation maintenance degree program that permits students to select from a variety of course sequences to provide the required breadth and depth of knowledge. These focus areas may be oriented toward a segment of the aviation industry, such as air carriers or general aviation, or toward a specific area, such as electronics, materials, propulsion, or logistics. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

Each program MUST provide evidence of a significant culminating upper division experience in aviation maintenance. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.3 Program Criteria for Aviation Electronics

These criteria apply to Aviation Electronics and similarly named applied programs such as: Avionics Technology, Airway Electronics or Aviation Technology.

5.3.1 Associate Programs. An Aviation Electronics program MUST prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

5.3.2 Baccalaureate Programs. Each program MUST provide evidence that graduates possess the necessary knowledge, skills, and

attitudes to competently and ethically function as an aviation electronics professional in the aviation industry.

An Aviation Electronics program is designed to prepare the graduate for a position in general, commercial, or military aviation, aerospace, and aviation related government agencies. Graduates **MUST** be able to apply science and technology to current problems in the aviation and the aviation electronics industry. The topical content of an Aviation Electronics program will depend on the area of specialization. However, graduates of all specializations **MUST** demonstrate a basic foundation in the electronics technologies. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

Each program **MUST** provide evidence of a significant culminating upper division experience in aviation electronics. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.4 Program Criteria for Aviation Studies

These criteria apply to Aviation Studies and similarly named applied programs such as: Airway Computer Science, Aviation Science, Security, Atmospheric Science, Aviation Meteorology or Aviation Human Factors. These criteria address programs not described in other program criteria.

5.4.1 Associate Programs. An Aviation Studies program **MUST** prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

5.4.2 Baccalaureate Programs. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as a professional in the aviation industry.

The Aviation Studies option provides baccalaureate courses in a coherent sequence to prepare the graduate for a position in the aviation industry and aviation related government agencies, requiring either broad or specialized educational preparation. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

Each program **MUST** provide evidence of a significant culminating upper division experience in aviation studies. Examples of a culminating experience include a capstone course, an internship, or a special project

that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.5 Program Criteria for Flight Education

These criteria apply to Flight Education and similarly named programs such as: Aircraft Systems Management, Flight Operations, Career Pilot, Professional Pilot, or Aeronautical Science.

5.5.1 Associate Programs. A Flight Education program **MUST** prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

Classroom and laboratory topics **MUST** lead to appropriate national certification. The program goals **MUST** include certification/licensure as a Commercial Pilot with an instrument rating. Each program **MUST** provide evidence that its graduates demonstrate competency in program objectives.

5.5.2 Baccalaureate Programs. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as professional pilots in the aviation industry.

Classroom and laboratory topics **MUST** lead to appropriate national certification. The program goals **MUST** include certification/licensure as a Commercial Pilot with an instrument rating, and multiengine land rating or flight instructor. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

Each program **MUST** provide evidence of a significant culminating upper division experience in flight education. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.5.3 Associate and Baccalaureate Programs: Instructional Control, Safety and Oversight.

- a. Institutions that utilize either internal or contract flight training as part of an aviation program **MUST** assure that:
 1. Student learning in the classroom is well integrated with learning in the laboratory.
 2. There is a common approach to safety with a single, integrated, and verifiable formal aviation safety program.

3. Training equipment is acquired or upgraded to reflect current industry practice.
 4. Students have adequate access to training equipment and resources.
- b. The institution MUST teach all academic and "ground school" courses using faculty and instructional staff employed by the institution.
 - c. "Flight laboratory" (hands-on instruction in aircraft and training devices or simulators) may be taught by either an institution's instructional staff OR by one or more qualified contractors.
 - d. If the institution uses one or more qualified contractors to offer flight laboratory instruction, the institution MUST through a formal contract or written agreement:
 1. Designate an appropriately qualified regular Full Time Equivalent (FTE) aviation faculty member to administer the Flight Education option and to provide responsible oversight of the contractor(s) to assure that the program meets or exceeds the performance requirements set forth in these Criteria.
 2. Employ (as regular faculty, adjunct faculty, or as a consultant) a qualified flight standards pilot, who has no business or employment relationship to the independent contractor(s). The flight standards pilot MUST conduct periodic flight standards evaluations to determine that students enrolled in the Flight Education option meet or exceed the performance standards set forth by the institution and AABI Criteria for the option. Every academic semester or quarter, as appropriate, the flight standards pilot MUST conduct a formal evaluation of at least one student completing each flight course in the AABI-accredited curriculum.
 3. Ensure that flight instructors possess the appropriate aeronautical certificates and ratings.
 4. Ensure that flight instructors meet the employment requirements of the institution for an equivalent position.
 - e. The relationship with the contractor MUST be expressed in document form and be available for review by all interested parties, including students, parents, institution departments, faculty, and accreditation agencies. The document MUST include at least the following:
 1. A description of the relationship between the provider of flight training and the academic department(s) involved in supporting and relating curricula.
 2. A description of the committee and meeting structure specifying regular interchange of curricular requirements and suggestions between the academic faculty and the provider of flight training.
 3. The means of scheduling flight training in use by the institution and provider of flight training.

4. The means of selecting flight training instructors for students, and the process available to students for changing instructors.
5. The means for reviewing student performance in flight training, with their advisor.
6. The means for curriculum and flight training program changes as a result of equipment and technology changes that may occur in both the flight training and academic curricula.

5.6 Program Criteria for Aviation Safety Science

These criteria apply to Aviation Safety Science and similarly named programs such as: Aviation Safety, Flight Safety or Industrial Safety.

5.6.1 Associate Programs. An Aviation Safety Science program **MUST** prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program **MUST** provide evidence that its graduates demonstrate competency in program goals.

5.6.2 Baccalaureate Programs. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as safety professionals in the aviation industry.

Each program **MUST** provide evidence that graduates are able to anticipate, recognize, and evaluate hazardous conditions and practices affecting people, property, and the environment; develop and evaluate appropriate strategies designed to mitigate risk; and apply principles of safety and health in a non-academic setting through an internship, cooperative or supervised experience.

Each program **MUST** provide evidence of a significant culminating upper division experience in safety science. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.7 Program Criteria for Air Traffic Control

These criteria apply to Air Traffic Control, Air Traffic Management or similarly named programs.

5.7.1 Associate Programs. An Air Traffic Control program **MUST** prepare the graduate for a position in the aviation industry that meets requirements equivalent to those established by the FAA in the AT-CTI program (or by the appropriate national regulatory agency) or transfer to a baccalaureate degree program.

5.7.2 Baccalaureate Programs. Each program MUST provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as air traffic controllers. Each program MUST meet requirements equivalent to those established by the FAA in the Air Traffic-Collegiate Training Initiative (AT-CTI) partnership agreement, or by the appropriate national regulatory agency.

Each program MUST provide evidence that graduates are able to anticipate, recognize, and evaluate potential situations in the en route or terminal environments; develop and act on appropriate strategies to alleviate conflicts; and apply principles of safe, expeditious, and orderly air traffic control rules to the flow of traffic.

Each program MUST provide evidence of a significant culminating upper division experience in air traffic management. An example of a culminating experience includes a capstone course that builds on prior course work. Evidence may include student portfolios, and other records of student achievement.

5.8 Program Criteria for Unmanned Aircraft Systems

These criteria apply to Unmanned Aircraft Systems (UAS) and similarly named programs:

5.8.1 Associate Programs. An Unmanned Aircraft Systems program MUST prepare the graduate for a UAS-related position in the industry or transfer to a baccalaureate degree program. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

5.8.2 Baccalaureate Programs. Each program MUST provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as UAS professionals in the Unmanned Aircraft Systems industry.

The Unmanned Aircraft Systems option provides baccalaureate courses in a coherent sequence to prepare the graduate for a position in the aviation industry and aviation related government agencies, requiring either broad or specialized educational preparation. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

Each program MUST provide evidence of a significant culminating upper division experience in unmanned aircraft systems. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

5.8.3 Associate, Baccalaureate, and Graduate Programs: Instructional Control, Safety, and Oversight.

- a. Institutions that utilize either internal or contract Unmanned Aircraft Systems flight or simulator training as part of an aviation program MUST assure that:
 1. Student learning in the classroom is well integrated with learning in the laboratory.
 2. There is a common approach to safety with a single, integrated, and verifiable formal aviation safety program.
 3. Training equipment is acquired or upgraded to reflect current industry practice.
 4. Students have appropriate access to training equipment and resources based on current export regulations.
 5. Government regulations and safety practices are included in the academic UAS curricula.
- b. The institution MUST teach all academic and "ground school" courses using faculty and instructional staff employed by the institution.
 1. All UAS operations and simulations will conform to government regulations and safety practices.
- c. "Flight laboratory" (hands-on instruction acting as a crewmember for an unmanned aircraft or simulator that is representative of one or more current classifications of UAS industry platform) may be taught by either an institution's instructional staff OR by one or more qualified contractors.
- d. If the institution uses one or more qualified contractors to offer Unmanned Aircraft System flight or simulator laboratory instruction, the institution MUST through a formal contract or written agreement:
 1. Designate an appropriately qualified faculty member to provide responsible oversight of the contractor(s) to assure that the program meets or exceeds the performance requirements set forth in these Criteria.
 2. Ensure that instructors possess the appropriate certification(s) or equivalent.
 3. Ensure that contract instructors meet the employment requirements of the institution for an equivalent position.
- e. The relationship with the contractor MUST be expressed in document form and be available for review by all interested parties, including students, parents, institution departments, faculty, and accreditation agencies. The document MUST include at least the following:

1. A description of the relationship between the provider of training and the academic department(s) involved in supporting and relating curricula.
2. A description of the committee and meeting structure specifying regular interchange of curricular requirements and suggestions between the academic faculty and the provider of training.
3. The means of scheduling flight training in use by the institution and provider of flight training.

5.9 Graduate Program Criteria

Each graduate program **MUST** be identified by a program criteria. A series of aviation-oriented components **MUST** be specific appropriate to the graduate aviation program. For master's and doctoral degrees, the required curriculum **MUST** meet at least the minimum duration and credit hours as specified by the institution and required by the regional or national accrediting agency. A research project at the master's or doctoral level (appropriate depth and rigor) **MUST** be required that demonstrates mastery of subject matter and data analysis and presentation. Assessment of these skills **MUST** include statistical foundations and applications, problem-solving skills at the advanced level and appropriate subject matter foundations.