

VOLUME 3 GENERAL TECHNICAL ADMINISTRATION**CHAPTER 19 TRAINING PROGRAMS AND AIRMAN QUALIFICATIONS****Section 1 Scope, Concepts, and Definitions****3-1071 TRAINING PROGRAM OVERVIEW.**

A. Flightcrew Member Training Programs. This chapter contains direction and guidance to be used by Federal Aviation Administration (FAA) personnel responsible for the evaluation, approval, and surveillance of Title 14 of the Code of Federal Regulations (14 CFR) part 121 and part 135 flightcrew member training programs. This section contains concepts and definitions that are used throughout the chapter:

- Section 2 addresses the training program approval process;
- Section 3 addresses basic indoctrination curriculum segments;
- Section 4 addresses emergency training curriculum segments;
- Section 5 addresses ground training curriculum segments;
- Section 6 addresses flight training curriculum segments;
- Section 7 addresses qualification curriculum segments;
- Section 8 addresses special curriculum segments;
- Section 9 addresses differences training;
- Section 10 addresses recurrent training;
- Section 11 addresses requalification training; and
- Section 12 addresses related aircraft designations, training, and deviations for part 121.
- Section 13 addresses pilot in command line checks.
- Section 14 addresses remedial training and tracking for part 121.

NOTE: Unless otherwise specified in this chapter, the term “operator” applies equally to an applicant for a certificate and an existing certificate holder.

B. Operator Training Program Development. An applicant for an air carrier certificate or operating certificate is required to develop a training program. An existing operator may need to revise its training program when purchasing new equipment, operating in a new environment, or obtaining new authorizations, or when new FAA requirements are specified. These new or revised training requirements must be incorporated into the operator’s training program. Each part 121 and part 135 operator (with the exception of a part 135 operator limited to a single pilot or a single pilot in command (PIC)) must obtain FAA approval of the curricula used for training flightcrew members, instructors, check pilots, and check Flight Engineers (FE). The operator is responsible for ensuring that its training program is complete, current, and in compliance with the regulations.

C. Operator Contracting with Training Providers.

1) Entities other than the certificate holder (other certificate holders or 14 CFR part 142 training centers) may train, test, or check that certificate holder's flightcrew members, instructors, check pilots, and check FEs, provided that:

- a) There is a preexisting contractual or other arrangement;
- b) That arrangement is in the primary certificate holder's FAA-approved training program; and
- c) The training, testing, and checking is conducted in accordance with the primary certificate holder's approved training program.

2) Guidance for outsource training can be found in Volume 3, Chapter 54, Section 5, Part 142 Training Centers: Outsource Training—Air Operators and/or Fractional Ownership Program Managers Contracting With Training Providers. Guidance for the issuance of Operations Specification (OpSpec) A031, Contract Training, authorizing such arrangements can be found in Volume 3, Chapter 18, Section 3, Part A Operations Specifications—General.

D. Operator Training Program Approval. It is the policy of the Flight Standards Service (AFS) to encourage operators to be innovative and creative when developing training methods and techniques. Principal operations inspectors (POI) are responsible for ensuring that regulatory requirements are met and that the operator's flightcrew members can competently perform their assigned duties before they are authorized to enter revenue service. Meeting regulatory requirements is paramount, but POIs should also embrace innovation in training delivery techniques. POIs should work collaboratively with their assigned carrier to explore new training techniques while also ensuring the carrier validates the results of any alternative techniques.

3-1072 DEFINITIONS. The following terms are used throughout this chapter and are defined as follows:

A. Aircraft Evaluation Group (AEG). FAA organization that sets training, checking, currency, type rating, Master Minimum Equipment List (MMEL), and maintenance standards for assigned certificated aircraft types. AEGs also address operational aspects of aircraft type certification and resolution of service difficulties.

B. Base Aircraft. An aircraft identified by a certificate holder for use as a reference to compare differences with another aircraft.

C. Categories of Training. A classification of training based on the previous qualification of the flightcrew member. Categories of training consist of one or more curricula. The categories of training are initial new-hire, initial equipment, transition, upgrade, recurrent, and requalification.

D. Checking and Qualification Modules. An integral part of a qualification curriculum segment, which contains checking and qualification requirements specified under part 121 or

part 135. For example, a qualification curriculum segment may contain a proficiency check module, a Line-Oriented Flight Training (LOFT) module, an Operating Experience (OE) module, and a consolidation of knowledge and skills module.

E. Common Type Rating. Common type rating is a term used in Flight Standardization Board (FSB) reports to describe a relationship between type ratings for aircraft with different type certificates (TC) that have no greater than level D training differences. See subparagraph GG for type rating.

F. Consolidation of Knowledge and Skills. A process by which a pilot, through practice and practical experience, increases proficiency in newly acquired knowledge and skills.

G. Courseware. Instructional material developed for each curriculum. This is information in lesson plans, instructor guides, computer software programs, audiovisual programs, workbooks, aircraft operating manuals, and handouts. Courseware must accurately reflect curriculum requirements, be effectively organized, and properly integrate with instructional delivery methods.

H. Currency. The experience necessary, within a specified period of time, for the safe operation of aircraft, equipment, and systems. Currency may include, but is not limited to, recent experience.

I. Curriculum. A complete training agenda specific to an aircraft type, a flightcrew member duty position, and a category of training. An example is an “initial new-hire, Boeing 727 Flight Engineer (FE) curriculum.” Each curriculum consists of several curriculum segments.

J. Curriculum Segment. The largest subdivision of a curriculum containing broadly related training subjects and activities based on regulatory requirements. Curriculum segments are logical subdivisions of a curriculum, which can be separately evaluated and individually approved. Examples are a ground training segment and a flight training segment. Each curriculum segment consists of one or more training modules.

K. Designated Related Aircraft. Any two or more aircraft of the same make with different TCs that have been designated as related by the Air Transportation Division (AFS-200) based upon request from the part 121 operator. This designation may allow credit between those aircraft to be applied for training, checking, recent experience, OE, operating cycles, and line operating flight time for consolidation of knowledge and skills. See subparagraph Y for related aircraft. See Volume 3, Chapter 19, Section 12, Related Aircraft Designations, Training, and Deviations—Part 121, for additional information regarding related aircraft designation.

L. Duty Position. The functional or operating position of a crewmember or aircraft dispatcher. For parts 121 and 135 operations, duty positions are PIC, second in command (SIC), FE, flight attendant (F/A), and aircraft dispatcher.

M. Element. An integral, subject-oriented (not task-oriented) part of a training, checking, or qualification module. For example, an electrical power ground training module may include such elements as a direct current (DC) power system, an alternating current (AC) power system, and circuit protection.

N. Eligibility Period. Three calendar-months (the calendar-month before the training/checking month, the training/checking month, and the calendar-month after the training/checking month). During this period, a flightcrew member must satisfactorily complete the required recurrent ground or flight training, flight check, proficiency check, competency check, or line check to remain in a qualified status. Training or checking completed during the eligibility period is considered to be completed during the training/checking month.

O. Event. An integral, task-oriented part of a training, checking, or qualification module that requires the use of a specific procedure or procedures. A training event provides a student an opportunity for instruction, demonstration, and/or practice using specific procedures. A checking or qualification event provides an evaluator the opportunity to evaluate a student's ability to correctly accomplish a specific task without instruction or supervision.

P. Final Approval. An FAA letter without an expiration date that authorizes an operator to continue training in accordance with a specific curriculum or curriculum segment. Final approval involving arrangements with other certificate holders or part 142 training centers must include the issuance of OpSpec A031.

Q. Flight Standardization Board (FSB). An FSB is a designated group of operations inspectors who determine type rating, certification, and training and qualification requirements for new or related aircraft. An FSB is usually established for large turbojet and turbopropeller aircraft, Special Federal Aviation Regulation (SFAR) No. 41 airplanes, and 14 CFR part 23 commuter category airplanes. An FSB is not usually established for 14 CFR parts 23 and 27 aircraft, unless the aircraft have unique design, flight, or handling characteristics.

R. Flight Standardization Board (FSB) Report. The FSB issues a report after evaluating any new or related aircraft. The FSB report contains minimum training and qualification requirements for the aircraft and any related aircraft. The FSB report also contains any special training requirements for that aircraft type.

S. Initial Approval. An FAA letter that conditionally authorizes an operator to begin training under a specific curriculum or curriculum segment pending an evaluation of training effectiveness. An initial approval letter must specify an expiration date for the conditional authorization. Initial approval involving arrangements with other certificate holders or part 142 training centers must include the issuance of OpSpec A031.

T. Instructional Delivery Methods. Methodology for conveying information to a student. This may include lectures, demonstrations, audiovisual presentations, programmed and directed self-study workshops, and drills. Ground training devices (GTD), flight simulation training devices (FSTD), aircraft, and computer workstations are also considered instructional delivery methods.

U. Modular Training. The concept of program development in which logical subdivisions of training programs are developed, reviewed, approved, and modified as individual units. Curriculum segments and modules may be used in multiple curricula. The modular approach allows great flexibility in program development and reduces the administrative workload on both operators and instructors in the development and approval of these programs.

V. Planned hours—Part 135. Part 135 does not require programmed hours to be defined within training programs. The hours associated with these programs are typically referred to as planned hours to avoid confusion with the requirements of part 121. Part 135 does, however, require each instructor, supervisor, or check pilot to certify the proficiency and knowledge of each flightcrew member upon completion of required training or evaluation. This certification may occur at any time when the instructor believes that the individual has reached the required level of proficiency during his or her scheduled training, provided that all elements and events of the approved training program have been successfully trained.

W. Programmed hours—Part 121. In accordance with part 121, § 121.403, each curriculum must include the programmed hours that the certificate holder will apply to the training. For initial new-hire, initial equipment, and recurrent categories, part 121 subpart N specifies the minimum programmed hours that each curriculum must include, unless reduced in accordance with § 121.405. Although part 121 subpart N does not specify minimum programmed hours for the other categories of training, the certificate holder must still include programmed hours in each curriculum.

X. Recent Experience. With respect to pilot flightcrew members, the flight experience required by § 121.439 or part 135, § 135.247. With respect to FEs, the flight experience required by § 121.453.

Y. Related Aircraft. Any two or more aircraft of the same make with either the same or different TCs that have been demonstrated and determined by the Administrator to have commonality.

Z. Related Aircraft Differences Training. The flightcrew member training for aircraft with different TCs that have been designated as related by AFS-200. (See Volume 3, Chapter 19, Section 12, for additional information regarding related aircraft differences training.)

AA. Testing and Checking. Methods for evaluating students as they demonstrate a required level of knowledge in a subject and, when appropriate, apply the knowledge and skills learned in instructional situations to practical situations.

BB. Training hours. The total amount of time necessary to complete the training required by a curriculum segment. This must provide an opportunity for instruction, demonstration, practice, and testing (as appropriate). This time must be specified in hours on the curriculum segment outline. For part 121, these are the programmed hours. For part 135, these hours are typically referred to as planned hours. A training hour includes time for normal breaks, usually 10 minutes each hour. Lunch breaks are not included.

CC. Training Module. A subpart of a curriculum segment that constitutes a logical, self-contained unit. A module contains elements or events that relate to a specific subject. For example, a ground training curriculum segment could logically be divided into modules pertaining to aircraft systems (such as hydraulic, pneumatic, and electrical). As another example, a flight training curriculum segment is normally divided into flight periods, each of which is a separate module. A training module includes the outline, appropriate courseware, and the

instructional delivery methods. It is usually, but not necessarily, completed in a single training session.

DD. Training Program. A system of instruction that includes curricula, facilities, FSTDs, training equipment, instructors, check pilots and check FEs, courseware, instructional delivery methods, and testing and checking procedures. This system must satisfy the training program requirements of part 121 or part 135 and ensure that each flightcrew remains adequately trained for each aircraft, duty position, and kind of operation in which the person serves.

EE. Training/Checking Month (Base month). The calendar-month during which a flightcrew member is due to receive required recurrent ground or flight training, a required flight check, a required proficiency check, a required competency check, or a required line check. Calendar-month means the first day through the last day of a particular month.

FF. Type Certificate (TC). An aircraft type includes all aircraft that are similar in design produced under a single TC issued, according to 14 CFR part 21 subpart B. Each aircraft type must have a TC before it can be used in air transportation. Aircraft TC determinations are established by an Aircraft Certification Office (ACO).

GG. Type Rating. A pilot type rating is an endorsement on a pilot certificate. It is an authorization to serve as PIC of a large (over 12,500 pounds gross takeoff weight (GTOW)) aircraft, a turbojet aircraft, or other aircraft when determined necessary by the Administrator. A type rating is assigned to a single aircraft type, typically make and model (e.g., B-757). However, in some cases, a different series of the same model may require a different type rating. For example, the B-747-100, -200, and -300 series require one type rating (B-747), but the B-747-400 and -800 require a different type rating (B-747-4). An aircraft that has commonality with another aircraft may be assigned a type rating that is considered in common with another type rating (e.g., B-757 and B-767).

3-1073 AIRCRAFT FAMILIES. There are five basic families of aircraft used in parts 121 and 135 operations. Aircraft are grouped into families according to their performance and flight characteristics to simplify development of training programs. The ground and flight training requirements for flightcrew members are significantly different for each family of aircraft. Within each aircraft family, however, the ground and flight training requirements are similar, even though individual aircraft may be quite different in construction and appearance. The five families of aircraft are as follows:

- Transport category and commuter category airplanes;
- Multiengine turbopropeller and SFAR airplanes;
- Multiengine general purpose airplanes;
- Single-engine general purpose airplanes; and
- Helicopters.

A. Transport Category and Commuter Category Airplane Family. The transport category and commuter category airplane family includes all airplanes certified under 14 CFR part 25 (and predecessor rules such as Civil Air Regulations (CAR) 4, 4a, and 4b and Special CAR Nos. SR-422, SR-422A, and SR-422B) and those few turbojet airplanes certified

under 14 CFR part 23. This family of airplanes also includes those few large airplanes of 30 or more passenger seats certified under Aeronautics Bulletin 7a (DC-3, L-18, C-46) known as large, nontransport airplanes when operated in revenue service. This aircraft family also includes those airplanes certified under part 23 in the commuter category.

B. Multiengine Turbopropeller and SFAR Airplane Family.

1) This aircraft family consists of multiengine turbopropeller airplanes (except those multiengine turbopropeller airplanes included in the transport category and commuter category airplane family) and those airplanes certified under part 23 in the normal category. This family does not include single-engine turbopropeller airplanes.

2) For the purposes of the flight competency check required by § 135.293(b), type, as to an airplane, means any one of a group of airplanes determined by the FAA to have a similar means of propulsion, the same manufacturer, and no significantly different handling or flight characteristics. For example, a pilot who completes a flight competency check in airplane A is not required to complete a flight competency check in airplane B if the FAA has determined that airplane A and airplane B are in the same group. Table 3-33, Multiengine Turbopropeller and SFAR Airplane Groups for the Purposes of the § 135.293(b) Competency Check, lists the specific makes and models in this aircraft family that the FAA has determined belong to the same group.

3) In cases where an operator requests approval to use one or more FSTDs, each FSTD must accurately replicate the specific make, model, and series (M/M/S) of the operator's aircraft as closely as possible in order to minimize required differences training and provide the best quality of training possible. In accordance with §§ 135.335 and 121.407, each FSTD must be specifically approved for the operator's use. Typically, this is accomplished by including a listing of each approved device in the operator's training program.

Table 3-33. Multiengine Turbopropeller and SFAR Airplane Groups for the Purposes of the § 135.293(b) Competency Check

Group	Models
Beechcraft Turbopropeller	B65-A90, 90, 99, 100, and 200.
Cessna Turbopropeller	Of the 400 Series.
Piper	Cheyenne Series.
Rockwell Commander Turbopropeller	680T, 690V, 680W, and 690.
Fairchild	SA 226-227 Series.

C. Multiengine General Purpose Airplane Family.

1) This aircraft family includes all multiengine airplanes certified for operations with nine or fewer passenger seats and not more than 12,500 pounds maximum takeoff weight (MTOW). It does not include any airplanes certified in the transport or commuter category regardless of the MTOW. Pilots operating airplanes in this family must have similar knowledge, skills, and abilities to operate them under part 135. For example, a pilot operating an airplane within this family may be required to have diversified training in short- and soft-field landings, but is not required to have training in V_1 cuts. This type of operation may require specific training, such as seaplane operations.

2) For the purposes of the flight competency check required by § 135.293(b), type, as to an airplane, means any one of a group of airplanes determined by the FAA to have a similar means of propulsion, the same manufacturer, and no significantly different handling or flight characteristics. For example, a pilot who completes a flight competency check in airplane A is not required to complete a competency check in airplane B if the FAA has determined that airplane A and airplane B are in the same group. Table 3-34, Multiengine General Purpose Airplane Groups for the Purposes of the § 135.293(b) Competency Check, lists the specific makes and models in this aircraft family that the FAA has determined belong to the same group.

Table 3-34. Multiengine General Purpose Airplane Groups for the Purposes of the § 135.293(b) Competency Check

Group	Models
Beechcraft Reciprocating	B50, 55, 56, 57, 58, 60, 70, and 95.
Cessna Reciprocating	C310, 320, 340, and 400 Series.
Cessna	336 and 337.
Piper Reciprocating	PA-23, PA-30, PA-31, PA-34, and PA-39.
Rockwell Commander Reciprocating	500, 560, 680, 685, and 720.

D. Single-Engine General Purpose Airplane Family. This aircraft family includes all single-engine airplanes of not more than 12,500 pounds MTOW, other than turbine-powered airplanes. Pilots operating airplanes in this family must have similar knowledge, skills, and abilities to operate them under part 135. For example, pilots operating single-engine airplanes are required to have training that applies to all airplanes in this group, such as forced landing procedures. The type of operation may require specific training, such as seaplane or skiplane training.

E. Helicopter Family. This aircraft family includes all helicopters. Helicopter operations under part 135 require similar knowledge, skills, and abilities. General training requirements for this family of aircraft include such events as autorotation and anti-torque failure. The type of operation may require specific training in events such as high-altitude landings or Airborne Radar Approach (ARA) procedures.

NOTE: There are other types of aircraft, such as single-engine turbopropeller, which do not fit in the five families of aircraft. Each of these types of aircraft requires a separate training program.

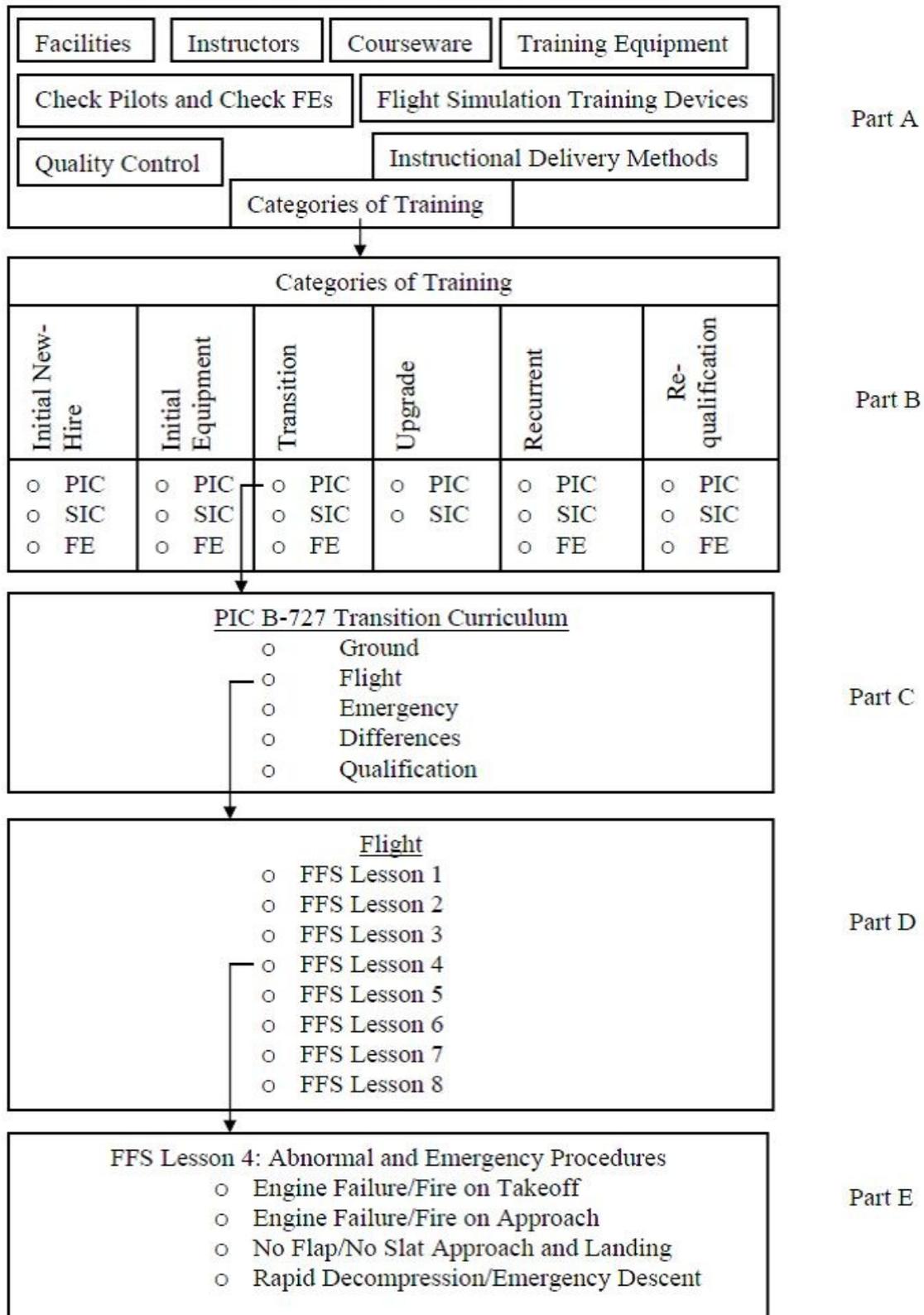
3-1074 TRAINING PROGRAMS: A SCHEMATIC DEPICTION. Figure 3-68, Schematic Depiction of Training Programs, shows the relationship between the total training program and the categories of training, curricula, curriculum segments, and training modules.

A. Modular Approach. The illustration in Figure 3-68 is only representative and is intended to present a framework for the modular development of a training program. By using this modular approach, the POI has various strategies available for the evaluation of training effectiveness and the planning of long-term surveillance. These strategies are discussed in Section 2 of this chapter.

B. Parts of the Training Program Depiction. The illustration in Figure 3-68 consists of the following five parts:

- 1) Part A depicts representative components which, when combined, constitute an operator's overall training program. These components differ in that some must be specifically approved by the FAA (e.g., check pilots), while others are accepted as essential supporting elements (e.g., facilities).
- 2) Part B illustrates the six categories of training that are recognized by the FAA.
- 3) Part C is an example of a curriculum that is a complete agenda of training specific to an aircraft type and flightcrew member duty position. This example depicts a PIC B-727 transition training curriculum.
- 4) Part D is an example of a specific curriculum segment and shows that it consists of several training modules. This example is the flight training curriculum segment of the PIC B-727 transition training curriculum.
- 5) Part E is an example of a specific training module. In this case, the module is full flight simulator (FFS) lesson number four.

Figure 3-68. Schematic Depiction of Training Programs



3-1075 CATEGORIES OF TRAINING. There are six basic categories of training applicable to part 121 and part 135 operators. The primary factors that determine the appropriate category of training are the student's previous experience with the operator and previous duty position with the operator. Each category of training consists of one or more curricula, each of which is specific to an aircraft type and a duty position (e.g., B-727 FE, B-727 PIC, and B-727 SIC). Training should be identified with and organized according to specific categories of training. When discussing training requirements, FAA inspectors should be specific regarding the category of training being discussed and use the nomenclature described in this order. POIs should encourage operators to use this nomenclature when developing new training curricula or revising existing training curricula. Use of this common nomenclature improves standardization and mutual understanding. The six categories of training are briefly discussed in the following subparagraphs.

A. Initial New-Hire Training. This training category is for personnel who have no previous experience with the operator (newly hired personnel). It also applies, however, to personnel employed by the operator who have not previously held a flightcrew member duty position with that operator. Initial new-hire training includes basic indoctrination training and training for a specific duty position and aircraft type. Except for a basic indoctrination curriculum segment, the regulatory requirements for initial new-hire and initial equipment training are the same. Since initial new-hire training is usually the employee's first exposure to specific company methods, systems, and procedures, it must be the most comprehensive of the six categories of training. For this reason, initial new-hire training is a distinct, separate category of training and should not be confused with initial equipment training. As defined by this handbook, initial equipment training is a separate category of training.

B. Initial Equipment Training. This category of training is for personnel who have been previously trained and qualified for a flightcrew member duty position by the operator (not new hires) and who are being reassigned for any of the following reasons:

1) For part 121 operations, the flightcrew member is being reassigned in one of the following circumstances:

a) Reassignment is to any flightcrew member duty position on an airplane of a different group (as defined by § 121.400, Group I is reciprocating and turbopropeller-powered and Group II is turbojet-powered). For example, a PIC on a DHC-8 is reassigned as a PIC on a B-717.

b) Reassignment is to a different flightcrew member duty position on a different airplane type, and the flightcrew member has not been previously trained and qualified by the operator for that duty position and airplane type. For example, an SIC on a B-737 is reassigned as a PIC on a B-757.

2) For part 135 operations, reassignment is to a different flightcrew member duty position on a different aircraft type, and the flightcrew member has not been previously trained and qualified by the operator for that flightcrew member duty position and aircraft type. For example, an SIC on a Cessna 400 series is reassigned as a PIC on a Beechcraft 200.

C. Transition Training. This category of training is for a flightcrew member who has been previously trained and qualified for a specific flightcrew member duty position by the operator and who is being reassigned to the same flightcrew member duty position on a different aircraft type. For example, an SIC on a B-737 is reassigned as an SIC on an A-320. For part 121 operations, the different type aircraft must be in the same group. If the different aircraft is not in the same group, initial equipment training is the applicable category of training.

D. Upgrade Training. This category of training is for a flightcrew member who has been previously trained and qualified as either SIC or FE by the operator and is being reassigned as either PIC or SIC, respectively, to the same aircraft type for which the flightcrew member was previously trained and qualified. For example, an SIC on a G-V is reassigned as a PIC on a G-V.

E. Recurrent Training. This category of training is for a flightcrew member who has been trained and qualified by the operator, who will continue to serve in the same duty position and aircraft type, and who must receive recurring training and/or checking within an appropriate eligibility period.

F. Requalification Training. This category of training is for a flightcrew member who has been trained and qualified by the operator but has become unqualified to serve in a particular flightcrew member duty position on an aircraft type due to not having received recurrent ground or flight training and/or a required proficiency check, flight check, line check, or competency check within the appropriate eligibility period. Requalification training is also applicable in the following situations:

- PICs who are being reassigned as SICs on the same aircraft type when seat-dependent training is required; and
- PICs and SICs who are being reassigned as FEs on the same aircraft type provided they were previously qualified as FEs on that aircraft type. If the PIC or SIC was not previously qualified as an FE on that aircraft type, initial equipment training is the applicable category of training.

G. Summary of Categories of Training. The categories of training are summarized in general terms as follows:

- 1) All personnel not previously employed by the operator as a flightcrew member must complete initial new-hire training.
- 2) All personnel must complete recurrent training for the duty position and aircraft type for which they are currently assigned within the appropriate eligibility period.
- 3) All personnel who have become unqualified for a duty position on an aircraft type with the operator must complete requalification training to reestablish qualification for that duty position and aircraft type.
- 4) All personnel who are being reassigned by the operator to a different duty position and/or aircraft type must complete initial equipment, transition, upgrade, or requalification training, depending on the aircraft type and duty position for which they were previously qualified.

NOTE: Figure 3-69, Categories of Training in Part 121 Operations, and Table 3-35, Categories of Training in Part 135 Operations, summarize these categories of training for part 121 and part 135, respectively. These tables indicate the appropriate category of training for normal flightcrew member progression or reassignment. They may not address certain situations. The guidance in this paragraph and the requirements of appropriate regulations must be followed when the tables do not address such situations.

Table 3-35. Categories of Training in Part 135 Operations

		New Duty Position			
		PIC 1	PIC 2	SIC 1	SIC 2
Current Duty Position	PIC 1	---	T	R	I
	SIC 1	U	I	---	T

Table key:

1 = a specific aircraft type (different from 2)

2 = a specific aircraft type (different from 1)

I = initial equipment training

R = requalification training

T = transition training

U = upgrade training

Examples:

- Current duty position is pilot in command (PIC) on aircraft type 1. Person is assigned to new duty position as PIC on aircraft type 2. Transition training is required.
- Current duty position is second in command (SIC) on aircraft type 1. Person is assigned to PIC duty position on aircraft type 1. Upgrade training is required.

Figure 3-69. Categories of Training in Part 121 Operations

		New Duty Position											
		PIC 1A	PIC 1B	PIC 2A	PIC 2B	SIC 1A	SIC 1B	SIC 2A	SIC 2B	FE 1A	FE 1B	FE 2A	FE 2B
Current Duty Position	PIC 1A	---	T	I	I	R	I	I	I	R/I	I	I	I
	PIC 2A	I	I	---	T	I	I	R	I	I	I	R/I	I
	SIC 1A	U	I	I	I	---	T	I	I	R/I	I	I	I
	SIC 2A	I	I	U	I	I	I	---	T	I	I	R/I	I
	FE 1A	I	I	I	I	U	I	I	I	---	T	I	I
	FE 2A	I	I	I	I	I	I	U	I	I	I	---	T

Table key:

1A = a specific Group I airplane type (different from 1B)

1B = a specific Group I airplane type (different from 1A)

2A = a specific Group II airplane type (different from 2B)

2B = a specific Group II airplane type (different from 2A)

I = initial equipment training

R = requalification training

T = transition training

U = upgrade training

R/I = requalification training if previously qualified for the duty position on that airplane type or initial equipment training if not previously qualified for the duty position on that airplane type.

Examples:

- Current duty position is pilot in command (PIC) on airplane type 1A. Person is assigned to new duty position as PIC on airplane type 1B. Transition training is required.
- Current duty position is second in command (SIC) on airplane type 1A. Person is assigned to PIC duty position on airplane type 1A. Upgrade training is required.
- Current duty position is PIC on airplane type 2A. Person is assigned to new duty position as PIC on airplane type 1B. Initial equipment training is required.
- Current duty position is PIC on airplane type 2A. Person is assigned to new duty position as Flight Engineer (FE) on airplane type 2A. If the person was previously qualified as FE on airplane type 2A, then requalification training is required. If the person was not previously qualified as FE on airplane type 2A, then initial equipment training is required.

3-1076 APPLICABILITY OF TRAINING CATEGORIES. Usually, operators will need to conduct training in all six categories of training. Recurrent training applies to all operators. Initial equipment training, transition training, upgrade training, and requalification training apply in most situations. However, transition training is not applicable for an operator who operates only one aircraft type. Initial new-hire training applies to operators who train and qualify newly hired personnel or personnel who have not been previously qualified as flightcrew members by that operator.

3-1077 CURRICULUM DEVELOPMENT. Operators must develop one or more curricula for each category, specific duty position, and aircraft type in which the operator conducts training.

A. Required Curricula. The operator is required to develop and maintain only those curricula that will be used. For example, if an operator specifies that all newly hired pilots must be trained first as B-727 FEs, the appropriate curriculum for that category of training would be B-727 FE initial new-hire training. The operator would not be required to develop any initial new-hire pilot training curricula for other aircraft or duty positions. Another example would be if a part 135 operator specifies that all newly hired pilots must be trained first as SICs on the BE-99, then only a BE-99 SIC initial new-hire training curriculum would need to be developed and maintained.

B. Single-Engine General Purpose Airplanes. A part 135 operator may include all makes and models of airplanes of the single-engine general-purpose family in a single curriculum for each category and duty position, provided the curriculum includes airplane-specific training for each make and model. For example, a single-engine PIC initial new-hire training curriculum may include both Cessna 172 and Piper PA-28 airplanes, provided the curriculum includes training on the specifics for each make and model (e.g., operating limitations, systems, and performance).

NOTE: Single-engine turbine-powered airplanes are not included in the single-engine general-purpose family. A separate curriculum is required for each type of single-engine turbine-powered airplane.

C. Multiengine General Purpose Airplanes. A part 135 operator may include all multiengine general-purpose airplanes that have been determined to be in the same group in a single curriculum for each category and duty position, provided the curriculum includes airplane-specific training for each model. (See Table 3-34 for the airplanes in this family that the FAA has determined belong to the same group.) For example, a Cessna multiengine reciprocating PIC initial equipment curriculum may include both the Cessna 310 and Cessna 320, provided the curriculum includes training on the specifics for each airplane type (e.g., operating limitations, systems, and performance).

D. Multiengine Turbopropeller and SFAR Airplanes. A part 135 operator may include all multiengine turbopropeller or SFAR airplanes that have been determined to be in the same group in a single curriculum for each category and duty position, provided the curriculum includes airplane-specific training for each model. (See Table 3-33 for the airplanes in this family that the FAA has determined belong to the same group.) For example, a Beechcraft

multiengine turbopropeller PIC transition curriculum may include both the Beechcraft 100 and Beechcraft 200, provided the curriculum includes training on the specifics for each airplane type (e.g., operating limitations, systems, and performance).

E. Transport Category and Commuter Category Airplanes. An operator must develop a curriculum for each airplane type in the transport category and commuter category family. An operator may include all models of a specific airplane type in a single curriculum for each category and duty position. Operators must provide differences training to qualify crewmembers in different models, series, or variants of the same airplane type.

F. Helicopters. An operator must develop a curriculum for each helicopter type. An operator may include all models of a specific helicopter type in a single curriculum for each category and duty position. Operators must provide differences training to qualify crewmembers in different models, series, or variants of the same helicopter type.

G. Curriculum Outlines. Curriculum outlines are documents used by operators to specify the curriculum content. Outlines must contain at least the information specified in Volume 3, Chapter 19, Section 2. This information is required so that the POI can determine whether the operator's curriculum meets regulatory requirements during phase three of the approval process (see Volume 3, Chapter 19, Section 2). Curriculum outlines should contain enough detail so that lesson plans can later be constructed from them. Detailed information should be placed in lesson plans, training manuals, and other documents maintained by the operator. This material is reviewed during phase four of the approval process (see Volume 3, Chapter 19, Section 2).

H. Curriculum Segments. Curriculum segments that make up a curriculum depend upon the category of training and the duty position. Curriculum segments are titled as follows:

- Basic Indoctrination—§ 121.415(a)(1) or § 135.329(a)(1);
- Crew Resource Management Training—§ 135.330;
- Aircraft Ground Training—§ 121.419 or § 135.345;
- Emergency Training—§§ 121.417 and 121.805 or § 135.331;
- Flight Training—§ 121.424, § 121.425, part 121 appendix E, part 121 appendix H, or § 135.347;
- Differences Training—§ 121.418(a) or § 135.341(b)(4);
- Related Aircraft Differences Training—§ 121.418(b);
- Special Curriculum Segment—various rules depending on the operation;
- Hazardous Materials (Will-Carry or Will-Not-Carry)—§§ 121.1001 through 121.1007, part 121 appendix O, or §§ 135.501 through 135.507, part 121 appendix O; and
- Qualification Segment—part 121 subpart O, part 121 appendix F, or part 135 subparts E and G.

I. Completion Requirements. Each person required to train under a curriculum must complete that curriculum in its entirety. Each student must satisfactorily complete all curriculum segments prescribed by an approved training curriculum. When a person has completed the

training and checking specified by a curriculum, that person is qualified to serve in a specific duty position on a specific aircraft type.

3-1078 MULTIPLE CURRICULA OF A SINGLE CATEGORY. Operators may develop and have multiple curricula approved for any single duty position and aircraft type. These curricula may have different programmed or planned hours based on the flightcrew member's previous knowledge and skill. For example, a part 135 operator may develop initial new-hire training curricula for:

- Pilots that have previous experience in part 135 operations in the same aircraft type and flightcrew member duty position;
- Pilots that have previous experience in part 135 operations in the same aircraft type, but in a different flightcrew member duty position;
- Pilots that have previous experience in part 135 operations in a different aircraft type; or
- Pilots that have previous experience in 14 CFR part 91 subpart K (part 91K) operations.

NOTE: In these examples, each curriculum would have different programmed or planned hours to reflect the flightcrew member's level of knowledge and skill related to the certificate holder's operation or aircraft. Regardless of an individual's previous qualifications, it is the operator's responsibility to ensure that each individual is proficient and fully qualified in the operator's procedures and operations prior to authorizing the individual to operate as a required flightcrew member.

A. Prerequisites. Operators that choose to develop multiple curricula must clearly specify the prerequisites for entry into each specific curriculum. Examples of prerequisites include the following:

- Documentation of a competency check within the last 12 calendar-months;
- Minimum total flight-hours;
- Minimum flight-hours in type or class, as appropriate; and
- Documentation of experience as a flightcrew member in operations under the same part.

NOTE: The flightcrew member's permanent training record must include a certification and record that verifies that the flightcrew member meets or exceeds the prerequisites of the reduced training hour curriculum. When the operator enters the certification in a computerized recordkeeping system, the certifying company official who made the determination must be identified with that entry.

B. Limitations—Part 135. Reduced training hour curricula may be developed for initial new-hire, initial equipment, transition, or upgrade training, and must contain all the elements and events of the full curriculum. Reductions may be made in planned hours for aircraft-specific systems ground training and/or flight training based on a crewmember's previous knowledge and

skill. However, reductions in planned hours based on a crewmember's previous knowledge or skill may not be made for certificate-holder-specific modules, including, but not limited to:

- 1) Basic indoctrination (§ 135.329).
- 2) Hazardous materials (hazmat) (§ 135.505), except as provided for in § 135.505(c), if the flightcrew member works for more than one certificate holder concurrently.
- 3) Emergency training (§ 135.331).
- 4) Crew Resource Management (CRM) training (§ 135.330).
- 5) Other certificate-holder-specific modules, such as those required by a certificate holder's OpSpecs or those determined by the certificate holder's POI.

NOTE: Reductions may not be made to the planned hours for any portion of recurrent training (except for hazmat, as provided for in § 135.505(c), if the flightcrew member works for more than one certificate holder concurrently).

NOTE: An individual must also satisfactorily complete the certificate holder's evaluation and qualification modules (e.g., required written/oral exams, competency and proficiency checks, line checks, and OE) before the certificate holder assigns him or her as a required flightcrew member. Reductions may not be made to the evaluation and qualification modules.

C. Limitations—Part 121. Reduced training hour curricula may be developed for initial new-hire, initial equipment, transition, or upgrade training, and must contain all the elements and events of the full curriculum. Reductions in programmed hours must be approved by the POI in accordance with § 121.405. See Volume 3, Chapter 19, Sections 3, 5, and 6, for additional information regarding reductions in programmed hours for part 121.

D. Flightcrew Members Employed by Multiple Operators. A flightcrew member who is employed (directly or by contract) by multiple operators concurrently must complete the applicable training curricula, including recurrent training, for each operator. In addition, the flightcrew member must satisfactorily complete each operator's checking and qualification modules, including recurrent checking.

3-1079 TRAINING MODULE CONSTRUCTION (ELEMENTS OR EVENTS).

Curriculum segments consist of training modules. Training modules are in turn constructed of elements or events arranged in a logical sequence. Curriculum segments and modules should be constructed so that instruction proceeds from the most basic concept and skill to the more advanced in a building block approach. The scope and content of each training module depends upon the category of training and the curriculum in which the curriculum segment is to be incorporated. The number and content of modules for a particular curriculum segment may vary from one category of training to another. For example, aircraft ground training modules in the upgrade training category may not need to be as comprehensive as the aircraft ground training modules in the initial equipment category of training. The amount of detail in each module

determines the training hours necessary to complete the training required by a curriculum segment.

A. Example Training Module Outlines. Operators should present training modules to the POI in outline form for initial approval. Table 3-36, Example of Related Elements in an Aircraft Ground Training Module Outline, and Table 3-37, Example of Related Events in a Flight Training Module Outline, are examples of training module outlines. These are only examples and are not intended to imply the only acceptable methods, sequence of instructional delivery, subject titles, or amount of detail.

Table 3-36. Example of Related Elements in an Aircraft Ground Training Module Outline

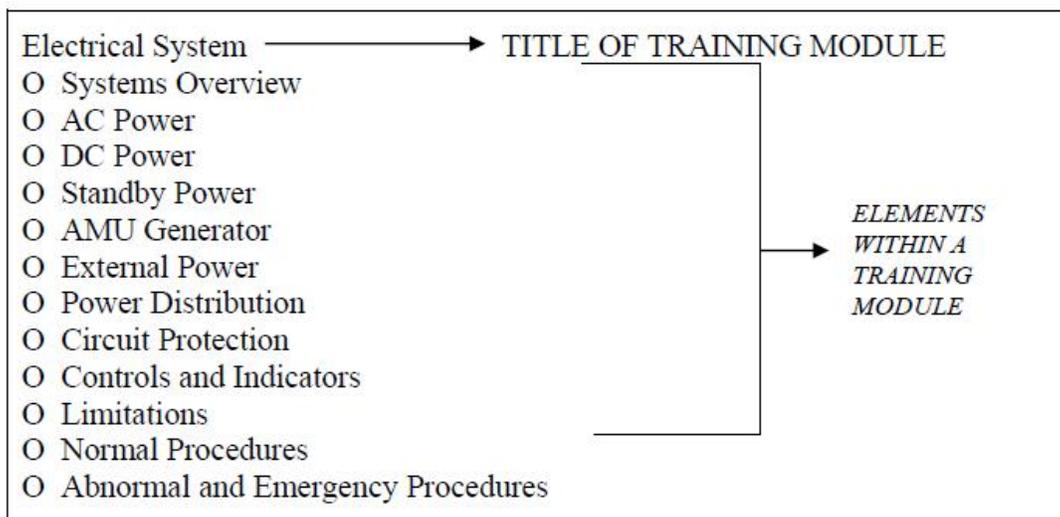
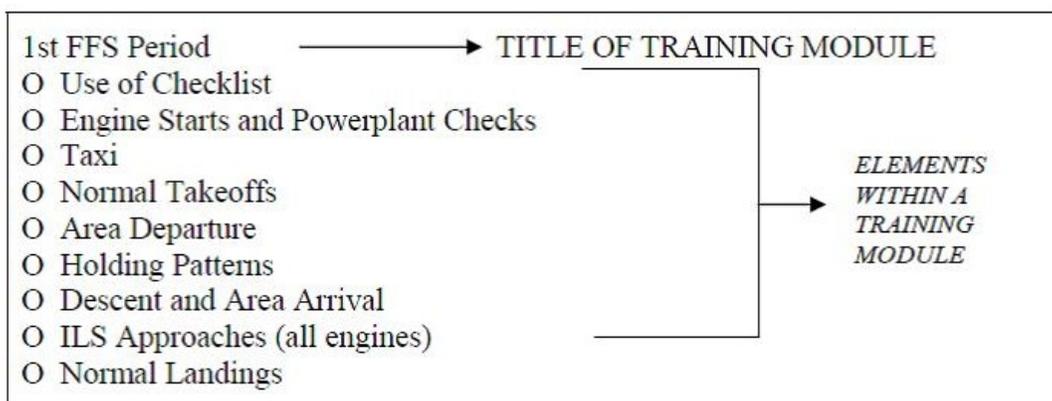


Table 3-37. Example of Related Events in a Flight Training Module Outline



B. Details in Training Module Outline. Operators must construct training module outlines with enough detail to ensure that the POI can identify that the essential features of the subject have been addressed and that regulatory requirements have been met. The training module outline will serve as a foundation from which the operator will develop complete and

usable courseware and select appropriate instructional delivery methods. The effectiveness of courseware and instructional delivery methods cannot be evaluated before training begins and must, therefore, be evaluated during phase four of the approval process.

1) Adjustment to Training Module Outlines. Once approved, training module outlines normally remain relatively fixed, requiring adjustment only when new elements or events are introduced. For example, if the operator proposed to install Automatic Dependent Surveillance—Broadcast (ADS-B) equipment in his or her aircraft, existing training module outlines would need to be revised to include ground and flight training of ADS-B. A revision to a training module outline must be approved by the POI.

2) Adjustment to Courseware. The operator has the flexibility to make adjustments to courseware as long as the adjustment does not add or delete elements or events from the training module outline. Any changes (adding or deleting elements or events) to the training module outline must be approved by the POI. POIs may also find it necessary, on the basis of surveillance reports or other information, to require the operator to modify courseware, instructional delivery methods, and training module outlines.

C. Using a Training Module in Multiple Curricula and Categories of Training.

A single training module may be used in more than one curriculum and in more than one category of training. For example, a training module that specifies a review of emergency evacuation procedures for recurrent training could be the same for requalification training. POIs should, however, encourage operators to develop courseware that places emphasis on the particular category of training. For example, PIC upgrade training should emphasize duty position responsibilities. The emphasis in SIC upgrade training (FE to SIC), however, should be on piloting skills as well as on the requirements of the new duty position. Transition training should emphasize aircraft systems and the procedures and piloting skills needed to operate a different aircraft type. In many cases, operators may develop different sets of courseware from a single training module outline to cover differences in emphasis.

RESERVED. Paragraphs 3-1080 through 3-1094.