

(x) Each normal and emergency procedure;

(xi) For pilots, stall prevention and recovery in clean configuration, take-off and maneuvering configuration, and landing configuration.

(xii) For pilots, upset prevention and recovery; and

(xiii) The approved Airplane Flight Manual.

(b) Initial and conversion ground training for pilots who have completed the airline transport pilot certification training program in §61.156 of this chapter, and transition ground training for pilots, must include instruction in at least the following as applicable to their assigned duties:

(1) Ground training specific to the certificate holder's—

(i) Dispatch or flight release procedures;

(ii) Method for determining weight and balance and runway limitations for takeoff and landing;

(iii) Meteorology hazards applicable to the certificate holder's areas of operation;

(iv) Approved departure, arrival, and approach procedures;

(v) Normal and emergency communication procedures; and

(vi) Approved crew resource management training.

(2) The training required by paragraph (a)(2) of this section for the airplane type.

(c) Beginning on April 27, 2022, and in addition to the requirements in paragraph (a) or (b) of this section, as applicable, initial ground training for pilots in command must include instruction and facilitated discussion on the following:

(1) Leadership and command, including flightcrew member duties under §121.542; and

(2) Mentoring, including techniques for instilling and reinforcing the highest standards of technical performance, airmanship, and professionalism in newly hired pilots.

(d) Initial ground training for pilots and flight engineers must consist of at least the following programmed hours of instruction in the required subjects specified in paragraph (a) of this section and in §121.415(a) unless reduced under §121.405:

(1) Group I airplanes—

(i) Reciprocating powered, 64 hours; and

(ii) Turbopropeller powered, 80 hours.

(2) Group II airplanes, 120 hours.

(e) Initial ground training for pilots who have completed the airline transport pilot certification training program in §61.156 must consist of at least the following programmed hours of instruction in the required subjects specified in paragraph (b) of this section and in §121.415(a) unless reduced under §121.405:

(1) Group I airplanes—

(i) Reciprocating powered, 54 hours; and

(ii) Turbopropeller powered, 70 hours.

(2) Group II airplanes, 110 hours.

(f) *Compliance and pilot programmed hours.* (1) Compliance with the requirements identified in paragraphs (a)(2)(xi) and (a)(2)(xii) of this section is required no later than March 12, 2019.

(2) Beginning March 12, 2019, initial programmed hours applicable to pilots as specified in paragraphs (d) and (e) of this section must include 2 additional hours.

(g) Before April 27, 2022, upgrade ground training must include either the instruction specified in paragraph (a) of this section or the instruction specified in §121.420. Beginning on April 27, 2022, upgrade ground training must include the instruction specified in §121.420.

[Doc. No. FAA-2010-0100, 78 FR 42377, July 15, 2013, as amended by Amdt. 121-366, 78 FR 67839, Nov. 12, 2013; Amdt. 121-382, 85 FR 10922, Feb. 25, 2020]

**§ 121.420 Pilots: Upgrade ground training.**

(a) Upgrade ground training must include instruction in at least the following subjects as applicable to the duties assigned to the pilot in command:

(1) Seat dependent procedures, as applicable;

(2) Duty position procedures, as applicable; and

(3) Crew resource management, including decision making, authority and responsibility, and conflict resolution.

(b) In addition to the requirements in paragraph (a) of this section, upgrade

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ground training must include instruction and facilitated discussion on the following:

(1) Leadership and command, including flightcrew member duties under § 121.542; and

(2) Mentoring, including techniques for reinforcing the highest standards of technical performance, airmanship, and professional development in newly hired pilots.

(c) Compliance date: Beginning on April 27, 2022, upgrade ground training must satisfy the requirements of this section.

[Amdt. 121-382, 85 FR 10923, Feb. 25, 2020]

### § 121.421 Flight attendants: Initial and transition ground training.

(a) Initial and transition ground training for flight attendants must include instruction in at least the following:

(1) General subjects—

(i) The authority of the pilot in command;

(ii) Passenger handling, including the procedures to be followed in the case of deranged persons or other persons whose conduct might jeopardize safety; and

(iii) Approved crew resource management initial training.

(2) For each airplane type—

(i) A general description of the airplane emphasizing physical characteristics that may have a bearing on ditching, evacuation, and inflight emergency procedures and on other related duties;

(ii) The use of both the public address system and the means of communicating with other flight crewmembers, including emergency means in the case of attempted hijacking or other unusual situations; and

(iii) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

(b) Initial and transition ground training for flight attendants must include a competence check to determine ability to perform assigned duties and responsibilities.

(c) Initial ground training for flight attendants must consist of at least the following programmed hours of instruction in the subjects specified in paragraph (a) of this section and in

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§ 121.415(a) unless reduced under § 121.405.

(1) Group I airplanes—

(i) Reciprocating powered, 8 hours; and

(ii) Turbopropeller powered, 8 hours.

(2) Group II airplanes, 16 hours.

[Doc. No. 9509, 35 FR 90, Jan. 3, 1970, as amended by Amdt. 121-250, 60 FR 65949, Dec. 20, 1995]

### § 121.422 Aircraft dispatchers: Initial and transition ground training.

(a) Initial and transition ground training for aircraft dispatchers must include instruction in at least the following:

(1) General subjects—

(i) Use of communications systems including the characteristics of those systems and the appropriate normal and emergency procedures;

(ii) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes;

(iii) The NOTAM system;

(iv) Navigational aids and publications;

(v) Joint dispatcher-pilot responsibilities;

(vi) Characteristics of appropriate airports;

(vii) Prevailing weather phenomena and the available sources of weather information;

(viii) Air traffic control and instrument approach procedures; and

(ix) Approved dispatcher resource management (DRM) initial training.

(2) For each airplane—

(i) A general description of the airplane emphasizing operating and performance characteristics, navigation equipment, instrument approach and communication equipment, emergency equipment and procedures, and other subjects having a bearing on dispatcher duties and responsibilities;

(ii) Flight operation procedures including procedures specified in § 121.419(a)(2)(vi);

(iii) Weight and balance computations;