- 2. Eligibility for enrollment. A person must have the following to enroll in the flight portion of the instrument rating course:
- (a) A private pilot certificate with an aircraft category and class rating appropriate to the instrument rating for which the course applies.
- (b) At least a valid third-class medical certificate issued under part 67 of this chapter.
  - 3. Aeronautical knowledge training.
- (a) Each approved course must include the aeronautical knowledge areas listed in section 3.(b) of this appendix, appropriate to the instrument rating for which the course applies, and must include at least:
- (1) 30 hours of training, if the course is for an initial instrument rating.
- (2) 20 hours of training, if the course is for an additional instrument rating.
- (b) Each approved course must include the following aeronautical knowledge areas:
- (1) The applicable Federal Aviation Regulations for IFR flight operations;
- (2) The appropriate information in the "Airman's Information Manual;"
- (3) The air traffic control system and procedures for instrument flight operations;
- (4) IFR navigation and approaches by use of radio aids:
- (5) Use of IFR en route and instrument charts procedure approach;
- (6) The procurement and use of aviation weather reports and forecasts, and the elements of forecasting weather trends on the basis of that information and personal observation of weather conditions;
- (7) The safe and efficient operation of aircraft under IFR and conditions appropriate to the instrument rating for which the course applies;
- (8) The recognition of critical weather situations and windshear avoidance;
- (9) Aeronautical decision making and judgment; and
- (10) Flight deck resource management, to include crew communication and coordination.
  - 4. Flight training.
- (a) Each approved course must include the following flight training on the areas of operation listed in section 4.(d) of this appendix, appropriate to the instrumentaircraft category and class rating for which the course applies, and must include at least:
- (1) 35 hours of instrument training, if the course is for an initial instrument rating.
- (2) 15 hours of instrument training, if the course is for an additional instrument rating.
- (b) Use of flight training devices.
- (1) The course may include training in a flight training device, provided they are representative of the aircraft for which the course is approved for, meet requirements of this paragraph, and the training is given by an authorized ground or flight instructor.
- (2) Training in a flight training device that meets the requirements of § 141.41(a)(1) of this part, may be credited for a maximum of 10 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.
- (3) Training in a flight training device that meets the requirements of § 141.41(a)(2) of this part, may be credited for a maximum of 5 percent of the total flight training hour

- requirements of the approved course, or of this section, whichever is less.
- (4) Training in a flight training device that meets the requirements of § 141.41(a)(1) of this part and a flight training device that meets the requirements of § 141.41(a)(2) of this part, may be credited for a maximum of 10 percent of the total flight training hour requirements of the approved course, or by this section, whichever is less. However, training in a flight training device that meets the requirements of § 141.41(a)(2) of this part may be credited for a maximum of 5 percent of the total flight training hour requirements.
- (c) In addition, each approved course must include the following flight training on the areas of operation listed in section 4.(d) of this appendix, appropriate to the instrumentaircraft category and class rating for which the course applies, and must include:
- (1) For an instrument-airplane single engine course. Instrument training time from an authorized instructor, on the approved areas of operation in section 4.(d) of this appendix, and the training must include at least one cross country flight that-
- (i) Is in a single engine airplane and is performed under IFR;
- (ii) Is a distance of at least 250 nautical miles along airways or ATC-directed routing with one of the routes being at least a straight-line distance of 100 nautical miles between airports;
- (iii) Involves an instrument approach at each airport; and
- (iv) Involves three different kinds of approaches with the use of navigation aids.
- (2) For an instrument-airplane multiengine course. Instrument training time from an authorized instructor, on the approved areas of operation in section 4.(d) of this appendix, and the training must include at least one cross country flight that-
- (i) Is in a multiengine airplane and is performed under IFR;
- (ii) Is a distance of at least 250 nautical miles along airways or ATC-directed routing with one of the routes being at least a straight-line distance of 100 nautical miles between airports;
- (iii) Involves an instrument approach at each airport; and
- (iv) Involves three different kinds of approaches with the use of navigation aids.
- (3) For an instrument-helicopter course. Instrument training time from an authorized instructor, on the approved areas of operation in section 4.(d) of this appendix, and the training must include at least one cross country flight that-
- (i) Is in a helicopter and is performed under IFR:
- (ii) Is a distance of at least 100 nautical miles along airways or ATC-directed routing with one of the routes being at least a straight-line distance of 50 nautical miles between airports:
- (iii) Involves an instrument approach at each airport; and
- (iv) Involves three different kinds of approaches with the use of navigation aids.
- (4) For an instrument-powered-lift course. Instrument training time from an authorized instructor, on the approved areas of operation in section 4.(d) of this appendix, and the training must include at least one cross country flight that-

- (i) Is in a powered-lift and is performed under IFR:
- (ii) Is a distance of at least 250 nautical miles along airways or ATC-directed routing with one of the routes being at least a straight-line distance of 100 nautical miles between airports;
- (iii) Involves an instrument approach at each airport; and
- (iv) Involves three different kinds of approaches with the use of navigation aids.
- (5) For an instrument-airship course. Instrument training time from an authorized instructor, on the approved areas of operation in section 4.(d) of this appendix, and the training must include at least one cross country flight that-
- (i) Is in an airship and is performed under
- (ii) Is a distance of at least 50 nautical miles along airways or ATC-directed routing with one of the routes being at least a straight-line distance of 25 nautical miles between airports;
- (iii) Involves an instrument approach at each airport; and
- (iv) Involves three different kinds of approaches with the use of navigation aids.
  - (d) Areas of operation:
  - (i) Preflight preparation;
  - (ii) Preflight procedures;
- (iii) Air traffic control clearances and procedures;
  - (iv) Flight by reference to instruments;
  - (v) Navigation aids;
  - (vi) Instrument approach procedures;
  - (vii) Emergency operations; and
- (viii) Postflight procedures. 5. Stage checks and end-of-course tests.

Each student enrolled in an instrument rating course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, and must consist of the appropriate approved areas of operation of section 4 of this appendix for the aircraft category and class rating for which the course applies.

## Appendix D—Commercial Pilot Certification Course.

- 1. Applicability. This appendix prescribes the minimum curriculum for a commercial pilot certification course required under this part, for:
  - (a) Airplane category—single-engine class.(b) Airplane category—multiengine class.(c) Rotorcraft category—helicopter class.

  - (d) Rotorcraft category—gyroplane class.
  - (e) Powered-lift category.
  - (f) Glider category—nonpowered class.
  - (g) Glider category—powered class.
  - (h) Lighter-than-air category—airship class.
- (i) Lighter-than-air category—balloon class.
- 2. Eligibility for enrollment.
- (a) A person must have the following to enroll in the flight portion of the commercial pilot certification course:
  - (1) At least a private pilot certificate;
- (2) At least a valid third-class medical certificate issued under part 67 of this chapter for a rating in an aircraft other than a glider or a balloon;
- (3) A signed and dated statement affixed to the application certifying that no known