

# CHAPTER 187 EVALUATE FAR PART 147 AVIATION MAINTENANCE TECHNICIAN SCHOOL'S CURRICULUM/REVISION AND INSTRUCTOR QUALIFICATIONS

## Section 1 Background

### 1. PTRS ACTIVITY CODES

A. *Maintenance.* 3384 (initial)/3385 (revision)

B. *Avionics.* 5384 (initial)/5385 (revision)

**3. OBJECTIVE.** This chapter provides guidance for evaluating the curriculum or curriculum revision of an Aviation Maintenance Technician School certificated under FAR Part 147.

### 5. GENERAL

#### A. *Definitions*

(1) *Check:* A check verifies the item's proper operation but does not require it to return to service. The item checked does not have to be the item overhauled.

(2) *Quality Standards:* A school's highest priority is to develop, in the student, those manipulative skills needed to stimulate return to service. However, it is not necessary for the training aid itself to meet "return to service" standards.

(3) *Troubleshoot:* In order to "troubleshoot" the airframe, powerplant, or aircraft component, the item must be made operational.

B. *Curriculum Background.* FAR § 147.21 sets forth the minimum curriculum requirements. Maintenance of curriculum requirements is set forth in FAR § 147.38.

(1) Practical projects referred to in FAR § 147.21(d) include all functions specified in the curriculum that involve hands-on tasks. Therefore, practical projects

should include virtually any task taught to levels 2 or 3, as specified in FAR Part 147 Appendices, since all of these require some practical application.

(2) FAR § 147.38 addresses the maintenance of curriculum requirements. Generally, the Federal Aviation Regulations prescribe minimum standards for certification and operation. These standards may be exceeded, but only when they are part of an approved curriculum.

(3) An Aviation Maintenance Technician School must adhere to its approved curriculum. Any new course material the school wishes to add must be incorporated into the approved curriculum and approved by the FAA before it may be used. This does not prohibit a school from teaching unapproved courses, such as refresher courses or academic courses required to complete a degree program. However, those courses must be clearly distinguishable from approved Aviation Maintenance Technician School courses.

(4) The Aviation Safety Inspector (ASI) should inform the school of what will be required to keep its approved Aviation Maintenance Technician School curriculum current with industry needs by revising courses. It must be made clear, however, that these revisions require FAA approval before they can be implemented.

C. *Curriculum Components.* The curriculum or revision must be approved by the FAA. The FAR Part 147 curriculum will consist of the following for each subject:

- Subjects taught
- Course content
- Teaching level requirements
- Test requirements

- Classroom or theory hours
- The total number of hours required for successful completion
- Shop or lab hours
- A schedule of required tests or quizzes
- Order of instruction for each rating

**NOTE: At the discretion of the ASI, and in consultation with the school, it may be advantageous to include the school's operating rules in the curriculum (FAR Part 147, Subpart C).**

D. *Texts.* If specific texts are approved as part of the curriculum, any change to a different text will require FAA approval as a revision.

## 7. CURRICULUM REQUIREMENTS

A. *Hours of Instruction.* The number of hours of instruction offered must be at least the minimum specified by FAR § 147.21. The school may offer more hours of instruction; however, regardless of the number of hours offered, the FAA must approve the entire aviation maintenance technician curriculum at the time of initial certification. The following blocks of time are not to be included in calculating the minimum number of instructional hours specified in FAR § 147.21:

- (1) Time used to take the FAA oral and practical test
- (2) Time spent in taking the FAA written test
- (3) Time set aside for review and final testing at the conclusion of the course. This is not to preclude review and testing from the curriculum, but to differentiate between the time spent in learning new material and the time spent in review.

B. *Order of Instruction.* The curriculum must describe the order of course progression for each rating offered. For example, Basic Electricity would be followed by Aircraft Electrical Systems.

C. *Subjects Prescribed by FAR Part 147.* The curriculum must cover the subjects and items prescribed in FAR Part 147, Appendix B, and in Appendices C or D, as applicable.

(1) Subjects that are submitted for approval as part of the curriculum will not be made part of the curriculum until approved by the FAA.

(2) Each subject item must be taught at the minimum level of proficiency as defined in FAR Part 147, Appendix A. When the school wishes to teach a subject item to a level beyond the requirements, the teaching level must be made part of the approved curriculum. Subject items must not be taught to a level less than that shown in the approved curriculum.

(3) Additional subjects/courses that are required by the school for their purposes, i.e., degree programs, shall not be submitted as part of the FAA approved curriculum.

(4) A distinction shall be made between additional courses/subjects that are part of the approved curriculum under FAR Part 147 and those that are not.

(5) The teaching of additional subject material beyond the requirements of FAR Part 147, Appendices B, C, and D will require additional instruction hours beyond those required by FAR § 147.21.

### D. *Practical Application Projects*

(1) The curriculum shall list the practical projects that must be completed for each subject item. There must be sufficient practical projects to address the requirements of FAR Part 147, Appendices B, C and D, as applicable. The curriculum shall include enough detail to evaluate the practical projects for correct teaching level, for equipment and tools needed, and for performance standards and objective grading criteria.

(2) The teaching level must be specified for each project under each subject item. The minimum teaching level is specified in FAR Part 147 Appendices. As in the case of theoretical courses, if the teaching level is to exceed the Federal Aviation Regulation requirements, it must be specified as such in the curriculum.

(3) The curriculum must show an appropriate amount of time for each project. ASIs shall look for time allotments that are excessive or insufficient.

(4) The curriculum shall provide that each task in each subject item is accomplished. For example, if a project requires that the student inspect and repair to accomplish a practical project, a requirement for both inspection and repair must be included in the project plan.

(5) The **overall** curriculum must be taught at least 50 percent in the shop or lab. However, not every subject item lends itself to 50 percent shop work. The ASI should ensure that shop and theory are balanced as appropriate to the subject item being taught. The ASI should review the curriculum if the courses seem artificially organized to meet the 50 percent requirement.

E. *Scheduling of Tests.* Upon completion of each curriculum subject, a test must be scheduled. In addition, quizzes may be scheduled between subject items.

F. *Grading Criteria.* A generally accepted academic standard for passing (including the FAA written exams) is a minimum of 70 percent. However, the school may require a higher minimum passing grade. All theoretical and practical portions of each subject listed in the curriculum must be passed to the approved grading standard. Each practical project must be passed as well to the approved standard.

#### G. *Make Up Provisions*

(1) The curriculum must show the number of hours of allowed absences.

(2) All material missed shall be made up in the same subject area.

(3) All practical projects missed shall be made up.

**9. REVISIONS TO THE CURRICULUM.** Changes to the approved curriculum must be approved before implementation. Changes in the curriculum may include changes in any of the following:

- Teaching level
- Hours of instruction
- Testing
- Make-up provisions
- Course content
- Equipment or facilities affecting instruction in theoretical subjects or the accomplishment of practical projects
- Order of instruction
- Addition or deletion of a rating

## **11. CREDIT FOR PREVIOUS INSTRUCTION OR EXPERIENCE**

A. *Crediting Previous Instruction at a Certificated Aviation Maintenance Technician School.* The school must use either a reliable method of evaluating documentation or an entrance test to ensure that previous instruction is comparable to that offered by the crediting school. When not using an entrance test, schools should be encouraged to use catalogs, course descriptions, and other documents to determine the credit to be granted.

(1) Students may take a course of study for one rating. The course of study will include the General portion of the curriculum. A student returning to school to study for a second rating after having graduated from the course for the first rating will not have to retake the General portion of the curriculum. The General portion undoubtedly must be separate and distinct from either the Airframe or the Powerplant portions and conform to the requirements of FAR Part 147, Appendices A and B.

(2) If a certificated aviation maintenance technician school is under suspension by the FAA, courses taught during the suspension period shall not be credited retroactively, even if the school becomes re-certificated later.

(3) An applicant must not teach students as an aviation maintenance technician school before school certification and then give credit for that training after the school becomes certificated.

(4) A school may credit a student with instruction that was completed satisfactorily at another aviation maintenance technician school either before or after its certification (FAR § 147.31(c)(1)(iv)).

*B. Crediting Previous Instruction from Other Schools (Non-Aviation Maintenance Technician Schools, Accredited and Non-Accredited).* As a general practice, credit may be granted only for subjects that apply to the General portion of the curriculum.

**NOTE: Accreditation, as referenced in FAR Part 147 refers to schools accredited within the United States. Certificated aviation maintenance technician schools may not grant credit for maintenance instruction received outside the United States.**

*C. Crediting Previous Instruction from Military Technical Schools.* When credit is granted, it may be granted only on the basis of an entrance test, as specified in FAR § 147.31(c)(2).

*D. Credit for Previous Experience.* As a general rule, creditable previous mechanic experience shall be **aviation**

**maintenance** experience. Credit for all previous experience must be documented and demonstrated by testing. The test must be equal to the test given to students who complete the comparable required curriculum subjects at the school.

### 13. INSTRUCTOR QUALIFICATIONS AND FACULTY REQUIREMENTS

#### *A. Faculty Requirements*

(1) An instructor must hold an FAA Mechanic Certificate with ratings appropriate to the subjects that the instructor teaches.

(2) Individuals listed as instructors, lab assistants or teaching assistants also must be certificated properly if they are used for instruction in any subjects other than mathematics, physics, drawing, or similar subjects. The suitability of non-certificated instructors to teach certain general courses will be evaluated on an individual basis. Cases have arisen where instructors have not taught these subjects in a manner applicable to aviation maintenance. ASIs must be aware of this type of situation and ensure that the appropriate information is taught according to the FAA-approved curriculum.

*B. Student/Teacher Ratios.* FAR § 147.23 requires at least one certificated instructor for each 25 students in each shop or laboratory class. The ASI must exercise discretion when prescribing a lower student to teacher ratio according to the needs of the class.

*C. Performance.* The ASI should encourage the school to provide for regular assessment of instructor performance.

## Section 2 Procedures

### 1. PREREQUISITES AND COORDINATION REQUIREMENTS

#### *A. Prerequisites*

- Knowledge of the regulatory requirements of FAR Parts 43, 65, and 147

*B. Coordination.* This task may require coordination with certification team members, regional specialists and Avionics ASIs.

### 3. REFERENCES, FORMS, AND JOB AIDS

A. *References*

- Order 8300.5, Aviation Safety Inspector, General Aviation Job Function Reference Guide, as amended

B. *Forms*

- FAA Form 8310-6, Aviation Maintenance Technician School Certificate and Ratings Application

C. *Job Aids.* None.

## 5. PROCEDURES

A. *Review the Curriculum.* For an initial certification, thoroughly analyze the curriculum prior to the date of the team inspection. Ensure the following:

- The number of hours meets the requirements of FAR § 147.21
- The curriculum fulfills the requirements of FAR Part 147, Appendices A, B, C, and D
- Instructor qualifications match the subjects being taught
- All subjects taught to a level of two or three involve practical hands-on projects
- At least 50 percent of the total curriculum is spent in the lab and/or shop
- The curriculum shows a schedule of tests for each subject
- The curriculum states the minimum standards for a student to successfully complete the requirements for FAA certification
- Grading criteria for academic and practical subjects have been developed

- Make-up provisions are included
- Procedures for crediting previous experience or instruction have been developed

B. *Review Instructor Qualifications.* Ensure that the instructors' certificates are valid and that there are no certificate actions pending.

## 7. TASK OUTCOMES

A. *Complete a PTRS Transmittal Form*

B. *Curriculum/Revision/Instructor Qualifications are Approved*

(1) For an initial certification, complete FAA Form 8310-6, Aviation Maintenance Technician School Certificate and Ratings Application. Attachments to FAA Form 8310-6 must include the following:

- The proposed curriculum
- A list of required practical projects
- A schedule of required tests
- A list of instructors names, with certificate numbers, ratings held, type, and subject(s) to be taught

(2) *Revision.* As appropriate to the approved method for recording revisions, initial the applicable document(s). Return the curriculum to the school.

C. *Curriculum/Revision/Instructor Qualifications Are Not Approved*

(1) *Initial Certification.* For an initial certification, complete FAA Form 8310-6. Fill out FAA Form 8310-4, which is on the back of FAA Form 8310-6.

(2) *Revision.* Send a letter to the school outlining the deficiencies and explaining why the curriculum is unacceptable. In all cases, reference the applicable Federal Aviation Regulation sections.

(3) *Instructor Qualifications.* If an instructor is found to be unqualified or otherwise ineligible to teach the subjects as designated by the school curriculum, notify the school in writing, detailing the specific problem.

**9. FUTURE ACTIVITIES.** Routine surveillance.