



Aviation Technician Education Council

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Mr. Kevin Morgan  
Supervisory Aviation Safety Inspector  
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800 Independence Ave SW  
Washington DC 20591-0001

Re: Competency-Based Education for Aviation Maintenance Technician Schools (AMTS)  
Comments to 14 Code of Federal Regulation Part 147 Notice of Proposed Rulemaking  
Docket ID: FAA-2015-3901; ID: FAA-2015-3901-0001; FR 2015-24841

Dear Kevin:

Pursuant to your request, the Aviation Technician Education Council (ATEC) submits these supplemental comments in support of its request for a competency-based part 147 regulation.<sup>1</sup>

Competency-, or outcomes-based education is an efficient, flexible approach to education that emphasizes accountability; students progress through programs based on an ability to demonstrate specified competencies.<sup>2</sup> The model is accepted across multiple industries<sup>3</sup> and government agencies.<sup>4</sup> With regard to aviation in particular, the methodology has been cited in congressional reports<sup>5</sup> and utilized in the agency's own guidance material.<sup>6</sup>

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<sup>1</sup> ATEC comments to [FAA-2015-3901-0072](https://www.regulations.gov/documentDetail;D=FAA-2015-3901-0072) at <https://www.regulations.gov/documentDetail;D=FAA-2015-3901-0072>

<sup>2</sup> Additional resources defining and illustrating competency-based education:

- Hickey, Daniel (2015). A Framework for Interactivity in Competency-Based Courses at <http://er.educause.edu/articles/2015/8/a-framework-for-interactivity-in-competency-based-courses>
- Voorhees, R. A. (2001). Competency-based learning models: A necessary future. *New Directions for Institutional Research* at <http://onlinelibrary.wiley.com/doi/10.1002/ir.7/epdf>
- Gruppen, L. D., Burkhardt, J. C., Fitzgerald, J. T., Funnell, M., Haftel, H. M., Lypson, M. L., Vasquez, J. A. (2016). Competency-based education: Programme design and challenges to implementation. *Medical Education* at <http://onlinelibrary.wiley.com/doi/10.1111/medu.12977/epdf>

<sup>3</sup> See, for instance, Council of Regional Accrediting Commissions 'Common Framework for Defining and Approving Competency-Based Education Programs' at [http://www.nwccu.org/Standards%20and%20Policies/PolicyDocs/C-RAC%20CBE%20Statement%20Press%20Release%206\\_2.pdf](http://www.nwccu.org/Standards%20and%20Policies/PolicyDocs/C-RAC%20CBE%20Statement%20Press%20Release%206_2.pdf)

<sup>4</sup> See, for instance, Department of Education competency-based learning web page at <http://www.ed.gov/oii-news/competency-based-learning-or-personalized-learning>

<sup>5</sup> See, for instance, a 2011 ARC working group recommendations for part 121 and 135 crewmember training, defining competency-based training: [https://www.faa.gov/about/office\\_org/headquarters\\_offices/agi/reports/media/FAA%20Report%20to%20Congress%20on%20Training%20Hours%20Requirements%20Review%20-%202009.22.2011.pdf](https://www.faa.gov/about/office_org/headquarters_offices/agi/reports/media/FAA%20Report%20to%20Congress%20on%20Training%20Hours%20Requirements%20Review%20-%202009.22.2011.pdf)

<sup>6</sup> See Advisory Circular 120-16G, Chapter 10, competency-based training in air carrier training programs at [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/AC\\_120-16G.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_120-16G.pdf)

Mr. Kevin Morgan

May 17, 2016

Page 2

Re: Competency-Based Education for Aviation Maintenance Technician Schools (AMTS)  
Comments to 14 Code of Federal Regulation Part 147 Notice of Proposed Rulemaking  
Docket ID: FAA-2015-3901; ID: FAA-2015-3901-0001; FR 2015-24841

Competency-based education is particularly valuable to the aviation industry because it helps assure the reliability of worker performance. Here are just some of the opportunities an AMTS could provide its students if governed by a competency-based rule—

- Competency achievement through active participation in a variety of quality classroom experiences (beyond testing) such as internships, externships, online instructional content, increased time for hands on learning, and educational travel.
- Receipt of credit following the evaluation of competency demonstration (check-off).
- Benchmark skill-based progress upon completing classroom instruction and classroom demonstration or a combination of the two.
- Individualized instruction for those requiring more time on a specific concept or skill before advancing, thus building a stronger foundation of knowledge.

Redefining the use of time is the single most significant policy enabler for competency-based learning models; ATEC therefore requested that the agency remove all prescriptive requirements from part 147, which would allow AMTS to incorporate competency-based learning models into their programs.

Because the agency specifies performance standards through part 65, and assessment criteria through testing standards for mechanic certificates, it does not need to expend resources mandating training curriculum, time, place, or pace. Indeed, a non-prescriptive regulation would allow regulators to take a systems approach to safety oversight. In essence, an outcomes-based rule would reduce FAA enforcement responsibilities; inspectors would oversee ongoing certifications requirements,<sup>7</sup> the agency would drive training through its testing standards,<sup>8</sup> and AMTS would have the responsibility to educate part 65 applicants to meet those standards in the manner it deems most appropriate.<sup>9</sup>

Thank you for the opportunity to provide additional comment to the proposed rule; we look forward to continual engagement as we work together to ensure future regulation supports our growing aviation technician workforce of the future.

Regards,



Crystal Maguire  
Executive Director

Attachment: ATEC Proposed Language for Part 147

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<sup>7</sup> See attached proposed language for §§ 147.13, 147.21 and 147.23, 147.31, 147.33, 147.35 and 147.43

<sup>8</sup> See 14 CFR §§ [65.75](#) and [65.79](#)

<sup>9</sup> See attached proposed language for § 147.21(a)

Mr. Kevin Morgan

May 17, 2016

Page 3

Re: Competency-Based Education for Aviation Maintenance Technician Schools (AMTS)  
Comments to 14 Code of Federal Regulation Part 147 Notice of Proposed Rulemaking  
Docket ID: FAA-2015-3901; ID: FAA-2015-3901-0001; FR 2015-24841  
Attachment

### **ATEC Proposed Language for Part 147**

*NOTE: In preparing these additional comments, some improvements to ATEC's original proposed language was identified. A tracked-changed document identifying the specific differences between this language and what was previously submitted is available upon request.*

§ 147.3 Certificate and operations specifications requirements.

No person may operate as a certificated aviation maintenance technician school without, or in violation of, an aviation maintenance technician school certificate, rating(s), or operations specifications issued under this part.

§ 147.5 Application for certificate.

(a) An applicant who meets the requirements of this part is entitled to an aviation maintenance technician school certificate.

(b) An application for a certificate must include the following:

(1) A description of the proposed curriculum;

(2) A description of the facilities, including the physical address of the certificate holder's primary location for operation of the school, and the materials and equipment to be used;

(3) A list of certificated instructors, including the kind of certificate, rating(s) held by each, and certificate number(s);

(c) An application for an additional rating or amended certificate must include only that information necessary to substantiate the change.

§ 147.7 Duration of certificate.

An aviation maintenance technician school certificate is effective from the date of issue until the certificate is surrendered, suspended or revoked.

§ 147.13 Facilities, equipment, and material requirements.

(a) Each certificated aviation maintenance technician school must provide and maintain the facilities, equipment, and materials that are appropriate to the rating(s) held.

(b) Each certificated aviation maintenance technician school must provide and maintain properly heated, lighted, and ventilated facilities, in accordance with local, state, and national building codes, for the rating(s) held, and as appropriate for the maximum number of students expected to be taught at any time.

(c) A certificated aviation maintenance technician school may conduct operations outside of its primary location if it provides suitable facilities that are acceptable to the FAA and meet the requirements of § 147.13(a).

§ 147.21 General curriculum requirements.

(a) Each certificated aviation maintenance technician school must have and use curriculum that meets the minimum requirements set forth in the school's operations specifications.

(b) The curriculum must be designed to qualify students to meet the minimum requirements of subpart D of 14 CFR part 65.

Mr. Kevin Morgan

May 17, 2016

Page 4

Re: Competency-Based Education for Aviation Maintenance Technician Schools (AMTS)  
Comments to 14 Code of Federal Regulation Part 147 Notice of Proposed Rulemaking  
Docket ID: FAA-2015-3901; ID: FAA-2015-3901-0001; FR 2015-24841  
Attachment

§ 147.XX Additional privileges.

The holder of a certificate issued under subpart B of this part may apply for and receive approval of special courses in the performance of special inspection and preventive maintenance programs for a primary category aircraft type certificated under § 21.24(b) of this chapter. The school may also issue certificates of competency to persons successfully completing such courses provided that all other requirements of this part are met and the certificate of competency specifies the aircraft make and model to which the certificate applies.

§ 147.23 Instructor requirements.

Each certificated aviation maintenance technician school must provide the appropriate number of instructors necessary to ensure adequate instruction and supervision of the students. A list of instructors holding a mechanic certificate will be maintained in its operations specifications.

§ 147.31 Attendance and enrollment, evaluation, and credit for prior instruction or experience.

(a) A certificated aviation maintenance technician school may not require any student to attend classes of instruction more than 8 hours in any day or more than 6 days or 40 hours in any 7-day period.

(b) Each school shall appropriately evaluate each student who completes a unit of instruction as shown in that school's approved curriculum.

(c) A school may credit a student with instruction or previous experience as follows:

(1) Instruction satisfactorily completed at—

(i) An accredited university, college, community college, or junior college;

(ii) An accredited vocational, technical, trade, or high school;

(iii) A military technical school, or

(iv) A certificated aviation maintenance technician school.

(2) A school may determine the amount of credit to be allowed—

(i) By an entrance evaluation to determine the student's competency; or

(ii) By an evaluation of an authenticated transcript from the student's former school.

(3) A school may credit a student with previous aviation maintenance experience comparable to required curriculum subjects. It must determine the amount of credit to be allowed by documents verifying that experience, and by giving the student an evaluation equal to the one given to students who complete the comparable required curriculum subject at the school.

(4) A school may credit a student seeking an additional rating with previous satisfactory completion of the general portion of another school's curriculum.

(d) A school must have procedures for determining final course grades.

(e) A school may issue authenticated documentation to students indicating eligibility to take the written general knowledge test after the student completes the corresponding portion of the curriculum.

(f) A school must have procedures for managing a distance learning program if it chooses to provide online-based education.

§ 147.33 Records.

(a) Each certificated aviation maintenance technician school must keep records for each student enrolled, showing—

Mr. Kevin Morgan

May 17, 2016

Page 5

Re: Competency-Based Education for Aviation Maintenance Technician Schools (AMTS)  
Comments to 14 Code of Federal Regulation Part 147 Notice of Proposed Rulemaking  
Docket ID: FAA-2015-3901; ID: FAA-2015-3901-0001; FR 2015-24841  
Attachment

- (1) The student's grades received through an authenticated transcript; and
  - (2) The instruction credited to the student under § 147.31(c), if any.
- (b) Each school must retain the records required by paragraph (a) for at least two years after the end of the student's enrollment.

§ 147.35 Transcripts and graduation certificates.

- (a) Official student transcripts evidencing grades received and programs completed must be authenticated by a school official and issued to the student in accordance with school policy.
- (b) Each school must provide authenticated documentation to each graduating student indicating the date of graduation and program completed.

§ 147.43 FAA Inspection.

A certificated aviation maintenance technician school must allow the FAA to inspect the school to determine compliance with this part.