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## ***Policy Brief: Modernization of Aviation Maintenance Training Regulations***

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Title 14 Code of Federal Regulations (CFR) part 147 (“part 147”) governs aviation maintenance technician schools (AMTS) that hold a Federal Aviation Administration (FAA) certificate. These schools provide a pathway for individuals to obtain employment as an FAA certificated mechanic, a well-paying and in-demand career. Students graduating from these programs have a high return on their investment; the average aviation technician student is in school for 21 months, pays \$16,321 in tuition, and, once certificated, has an average starting annual pay of \$45,000.<sup>1</sup>

Unfortunately, outdated regulatory requirements are doing these students a disservice. Part 147 was originally established under the Civil Aviation Administration and re-codified into 14 CFR in 1962. Since that time, neither the regulation nor the subject areas it dictates be taught have been significantly revised. Under the current rule, AMTS are *mandated* to teach 60-year-old technologies and obtain FAA approvals to modify curriculums and operating procedures. The long-outdated rule is creating an increasingly inflexible framework, hindering innovation in aviation technical education, and continually increasing new hire training costs for employers that must address a widening skills gap.

Industry began advocating for modernization of the current rule more than a decade ago. With no regulatory relief in sight and a host of toxic provisions included in recent FAA regulatory proposals, Congress stepped in and introduced the Promoting Aviation Regulations for Technical Training (PARTT) 147 Act ([S.3043/H.R.5427](#)). The bill is an [industry-supported](#), bipartisan and bicameral bill championed by Sens. Jim Inhofe (R-Okla.) and Tammy Duckworth (D-Ill.) and Reps. Don Young (R-Alaska) and Cheri Bustos (D-Ill.).

If passed, the PARTT 147 Act would direct the FAA to promulgate community-drafted, performance-based regulation that would require the FAA to defer to Department of Education (DoE) expertise in all areas concerning quality of education. The law would modernize how aviation technical schools teach and ensure that institutions have the needed flexibility to adequately support the aviation industry’s technical workforce needs.

The need for regulatory relief from the current part 147 is astonishingly acute during ongoing school closures due to the COVID-19 pandemic. Under the current rule, aviation technical schools must wait for FAA approval to provide instructional content within an online format, and most FAA personnel who are saddled with the responsibility of approving online delivery have no educational background whatsoever. While schools are adapting and submitting

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<sup>1</sup> See ATEC’s 2019-2020 Pipeline Report, available at [www.atec-amt.org/pipeline-report](http://www.atec-amt.org/pipeline-report).

necessary paperwork, the additional steps are adding unnecessary complexity to an already tenuous situation while students suffer.

### History and Rulemaking Activities<sup>2</sup>

In 2009, an industry working group [formally recommended broad changes](#) to part 147. Seven years later, on Nov. 19, 2015, the agency issued a [notice of proposed rulemaking](#) (NPRM) setting forth sweeping changes to the rule. While the NPRM included long-awaited removal of static curriculum requirements, [ATEC](#) and a [coalition of aviation trade organizations](#) objected to many aspects of the proposal and called for a less-prescriptive rule that focuses on learning outcomes in lieu of hour and operating requirements. In an effort to further explain industry's position, ATEC representatives held [face-to-face meetings](#) with FAA and Department of Transportation officials, [submitted supplemental comments](#), and [garnered legislative support](#) for a more flexible rule.

Ten days after the April 5, 2019 [congressionally-imposed](#) deadline for the FAA to promulgate a final part 147 rule, the FAA published a [supplemental notice of proposed rulemaking](#) (SNPRM). [In its comments](#) to the SNPRM—which were again [broadly supported](#) by industry—ATEC objected to yet another layer of requirements and approvals that would be needed for schools to implement competency-based programs and provide content away from their primary location, many of which duplicate DoE accreditation mandates. The council reiterated its plea for the FAA to defer to DoE oversight in all matters concerning the quality of education, and to instead focus its resources on aviation-specific programmatic aspects such as facilities, equipment, material requirements, unique instructor qualifications, and assessment based on student performance on the mechanic exams.

Since the close of the comment period, the community has faced the conundrum of pushing for a sorely needed new rule, while having little faith that the new regulation will provide a workable framework to meet workforce development needs.

### *Toxic FAA Proposals*

As illustration of the agency's efforts to amplify an already over-prescriptive regulation, the new part 147—if promulgated as proposed in the NPRM and SNPRM—would double the length of the current rule, from 2719 to 5421 words. The proposals do not provide adequate relief from current requirements and instead introduce additional cumbersome mandates and approval requirements that further duplicate DoE quality standards. The following are a few examples of toxic provisions contained in the FAA proposals:<sup>3</sup>

- Proposed § 147.14 (satellite training locations) was published [in response to industry's call for relief](#) from regulatory interpretations that limit a school's ability to provide part 147 content away from its primary location. The FAA's nearly 500-word proposal creates a new set of approvals and limitations that will dissuade many AMTS from understanding or being able to use the methodology for enhancement of curriculum delivery. Almost all educational institutions provide content outside their four walls—either through online instruction, at an internship site, or at an additional facility—yet the FAA insists on controlling every site at which aviation-related instruction is provided. The notion that AMTS are not capable of providing quality instruction away from a primary location without an aviation safety inspector's blessing and oversight is illogical. Limitations on where

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<sup>2</sup> A full overview and timeline of activities surrounding modernization of aviation maintenance education standards is available at [www.atec-amt.org/part-147](http://www.atec-amt.org/part-147).

<sup>3</sup> ATEC's full response to the proposed rule is set forth in its comments to the NPRM ([available here](#)) and SNPRM ([available here](#)).

an AMTS can provide content is outdated and has no place in modern educational regulation, let alone within an aviation safety regulation.

- Proposed § 147.21 (general curriculum requirements) continues the FAA's current practice of dictating program hour requirements and insisting that the FAA approve every aspect of AMTS curriculum. If schools are going to properly train the next generation of aviation mechanics, they must have the flexibility to revise curricula as needed and move students through aviation technical programs based on learning outcomes, which are common practices in accredited institutions. Agency concerns about controlling even the slightest amendments to curriculum are unfounded, given the agency facilitates the ultimate quality check—the FAA mechanic certification exam. Industry maintains that, given the knowledge and skill certification standards, accredited institutions have already proven that they possess the expertise and infrastructure necessary to meet the high educational standards defined by regional and national accreditation bodies and should have the academic freedom to create more successful mechanic candidates without FAA micromanagement. A program's quality will ultimately be judged through the AMTS students' performance on the FAA exams, as otherwise provided for in the FAA's part 147 proposals.<sup>4</sup>
- Proposed § 147.22 (competency-based training curriculum) would require FAA approval before a school could adopt a competency-based program. While the concept—allowing students who already have the requisite skills and knowledge to move through a program at a faster pace—received broad industry support, the proposal sets forth a complicated web of mandates and approvals for any school seeking to offer coursework that uses this contemporary competency assessment methodology. Under the proposal, the aviation safety agency would oversee a host of education-related elements, including methods of instruction (i.e., one-on-one versus group), the order in which content is offered, and testing schedules. These provisions are reminiscent of those ATEC recommended for removal in its comments to the NPRM, given similar quality standards already dictated by the ED. Industry argues that FAA inspectors not only lack the expertise to assess these education-related elements, but their oversight is inefficient and duplicative of existing DoE oversight responsibilities. The community asked the agency to remove this section entirely and leave oversight of these aspects to existing expertise within DoE.
- The FAA proposal would create a separate and independent training standard to guide AMTS curriculum development. In the time since the NPRM was published, there has been a fundamental shift in the way the agency approaches mechanic certification assessment. The new [Airman Certification Standards](#) (ACS) will set forth knowledge and skill standards for FAA certificated mechanics. While those standards have historically been housed in part 147, repositioning them in a certification standard (to be used no matter the pathway an individual takes to certification) as the basis for both testing and training is an appropriate and welcome change. Industry, through ATEC's comments to the SNPRM, and a [series of letters](#) between the FAA and community leaders, asked the FAA to reconsider its approach. Instead of creating a separate training standard, industry leaders recommend using the mechanic ACS as the basis for the part 147 training curriculum. Once published, the ACS will be continually updated by an industry-FAA working group and should be the vehicle to ensure both testing and training evolved consistently and simultaneously as mechanic knowledge and skill requirements advance. Through written correspondence, the FAA has categorically rejected this recommendation, insisting that separate training standards were appropriate, and going so far as recognizing the inefficiencies that would

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<sup>4</sup> The practice is consistent with FAA oversight of part 141 flight schools, which have a far more flexible regulatory framework than their maintenance counterparts.

be created by promulgating its proposal as written. The council is highly concerned with this approach and administrative burdens it will create should the agency's proposals be promulgated as written.

While ATEC has made its concerns known through its comments, subsequent written correspondence, face-to-face meetings, and regulatory proposals suggest the agency is undeterred in its decision to pursue an antiquated and inefficient approach to oversight of technician education. Given industry's complete lack of faith that FAA officials are hearing our concerns, or that a revised rule will be promulgated anytime soon, the council is taking proactive measures and asking Congress for help.

### **The PARTT 147 Act**

Language in the PARTT 147 Act is largely derived from regulatory text offered by ATEC in its comments to the original and supplemental FAA proposals. If the Act is signed into law, it would align regulatory oversight as recommended by industry and ATEC. The FAA would continue to oversee a program's facilities, equipment, and instructor qualifications, and control the certification standards that school curriculums must adhere to. It would make the final determination on whether an individual is ultimately qualified to hold an FAA mechanic certificate, and have the means to continually assess AMTS performance through analysis of student passage rates.

Through their approved accrediting institutions and standards, DoE would oversee the school's "quality system," that is, any items related to items such as methods and effectiveness of instructional design and delivery, how and where educational content is consumed, grading systems, testing schedules, curricula, competency-based programs, teacher ratios, class sizes, and credit hour requirements. Under the watchful eye of their accrediting institutions, AMTS would have the flexibility to assess educational outcomes in lieu of meeting hours and curriculum mandates—which is common practice in other technical-related programs.

In the end, the FAA does, and always will, control the distribution of mechanic certificates through assessment of an individual's skill and knowledge. The Act would keep the agency in its own lane such that it is not responsible for dictating how schools *impart* that skill and knowledge.

### *Airman Certification Standards*

The PARTT 147 Act's direct rule language relies heavily on the emerging FAA ACS, the product of an industry-agency joint effort to clearly define the knowledge and skill required to obtain any FAA airman certificate.<sup>5</sup> Under the proposed framework, schools would use the mechanic ACS<sup>6</sup> as the basis for their curriculum. Since the ACS will also be used as the standard for FAA mechanic testing, this alignment would ensure training and FAA testing are correlated and that AMTS programs continue to evolve as the FAA continually revises the ACS in line with industry needs.

The agency would use FAA mechanic testing results as a check on the quality of a school's program (the Act puts forth a 70% target passage rate for all AMTS students taking the FAA mechanic test). Should the language in the

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<sup>5</sup> [FAA reauthorization bill mandates](#) require that the FAA consider the ACS in the part 147 final rule, something not contemplated in the original or supplemental notice of proposed rulemaking.

<sup>6</sup> A draft version of the mechanic ACS can be found on the ATEC website at [www.atec-amt.org/airman-certification-standards](http://www.atec-amt.org/airman-certification-standards).

PARTT 147 Act be promulgated before publication of the mechanic ACS, the rule would instead rely on current practical test standards (PTS) as a framework for curriculum until the ACS is finalized.<sup>7</sup>

### *Economic Impact*

The Act will not impose additional costs on educational institutions. If it were passed tomorrow, there would be no mandate that AMTS adopt new curriculum. While programs would be required to align with FAA testing standards (be it the current PTS or emerging ACS), those testing standards do not differ significantly from current part 147 requirements. (Indeed, some programs would realize cost savings if given the opportunity to remove outdated subject areas from their curricula.) The purpose of aligning training and testing through the ACS is not to require an immediate update to AMTS curriculum, but to create the framework such that schools can incorporate new content as mechanic certification standards are updated and revised moving forward.

### *Workforce Need*

The FAA proposals as written, pose an immediate threat to the future aviation technician pipeline. Even while in the midst of the current COVID-19 pandemic, few will deny the long-term need for qualified technical personnel to support our industry. If promulgated, specific provisions outlined above would exacerbate an already overly prescriptive regulatory framework and further inhibit the already inadequate pipeline of aviation technicians.<sup>8</sup> While short-term demands for aviation technical personnel post COVID-19 remain to be seen, the time to fundamentally change and improve the way our incoming maintenance personnel are trained is now.

Giving the professional education community the freedom to do what they do best will create more efficient, innovative, and better-equipped programs, and ultimately, a broader flow of better prepared entry-level aviation mechanics.

### **Conclusion**

To reiterate, the council opposes regulatory proposals that will subject accredited institutions of higher learning to duplicative—and sometimes contradictory—government requirements that do nothing but stagnate an already inadequate workforce pipeline.<sup>9</sup> While the community is in dire need of a modernized rule, it is also acutely aware that promulgation of an unworkable framework could put aviation education in an even worse position for decades to come, unable to efficiently and freely create a qualified stream of qualified personnel for aviation technical jobs.

Never has the inflexibility of the current regulatory framework been more apparent than now. If the PARTT 147 Act had been passed prior to the COVID-19 pandemic, many AMTS would be in a different position today. The pandemic has driven 20% of our certificated programs to suspend operations, many due to FAA regulatory barriers that some schools perceive too onerous to overcome.

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<sup>7</sup> The FAA was originally scheduled to publish the mechanic ACS in the summer of 2020. Deliberations on whether Department of Transportation rules require all ACS to go through notice and comment rulemaking—something industry vehemently opposes—has held up publication of several ACS, including the mechanic ACS.

<sup>8</sup> The 2019-2020 [ATEC Pipeline Report](#) found that new mechanics make up 2% of the population annually, while 33% of the workforce is at or near retirement age. Industry will need to produce an *additional* 2,700 mechanics annually over its 2019 output to meet the 20-year demand.

<sup>9</sup> See aviation technical workforce demand projections in the latest edition of the.

Many schools that have successfully implemented online programs have said they will incorporate distance learning into their aviation technical programs moving forward, something that will require investment of resources to obtain the required FAA sign-off. Given the inevitable fact that many of these schools will need to adjust their approach in an effort to satisfy the whims of a local FAA inspector, many are preparing for an uphill battle, and others will decide not to even try. Industry needs a new rule that will support innovation in education, not hinder it.

The regulatory framework must change if schools are to thrive in the aviation industry's 'new normal.' If FAA proposals are promulgated as written, they will hurt, not help, a school's ability to adapt to ever changing technologies and new educational environments and delivery systems. The PARTT 147 Act would remove woefully out-of-date curriculum mandates and provide a new and innovative framework where schools could thrive, and ultimately provide a better outcome for their students, and the future of the aviation workforce.

### **Additional Reading**

[ATEC Legislative One-Pager](#)

[Aviation Education Demands Better, Presents Regulatory Solution to Modernize Maintenance Training](#), AMT Magazine, Feb. 20, 2020

[Industry Forces Congressional Action On Maintenance Training Standards](#), Aviation Week Network, Dec. 3, 2019

[Maintenance Educators Ask FAA To Expand Enrollment Programs](#), Aviation Week Network, Oct. 3, 2019

[Proposed Regulation Raises Questions About FAA's Role in Education](#), Aviation Week Network, May 1, 2019

[Aviation struggles with 50-year-old maintenance training regulation](#), The Hill, August 7, 2017

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