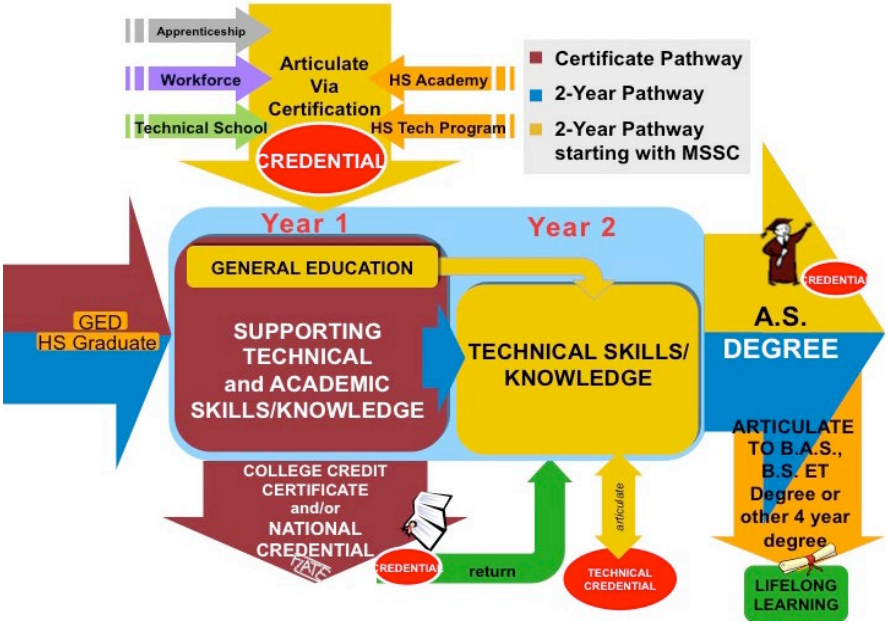
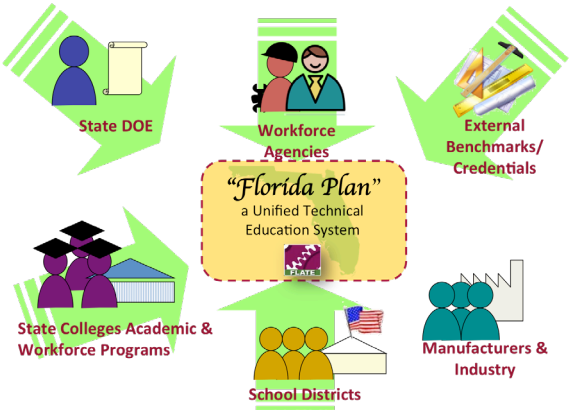
FLORIDA'S ENGINEERING TECHNOLOGY A.S. DEGREE PROGRAM

SUPPORTING FLORIDA'S DIVERSE MANUFACTURING & HIGH TECHNOLOGY INDUSTRIES

The Florida Advanced Technological Education (FLATE), working with the Florida Department of Education (FLDOE), Florida colleges, and Florida industries defined a new A.S. degree program in Engineering Technology (ET). Approved by the FLDOE in 2007, the degree program with embedded industry and academic credentials offers students a variety of technical specialization pathways built upon a common technical core that supports all manufacturing sectors as well as many related industries.



The structure of this degree is a "one-plus-one" approach in which a student takes general education courses and a strong technical core curriculum in year one that aligns with the Manufacturing Skills Standards Council (MSSC) Certified Production Technician (CPT) credential. The 18-credit hour "ET Technical Core" includes introductory computer drafting; quality; safety; measurement and instrumentation; processes and materials; and electronics. Year two of the ET degree focuses on a specialization track. Each college is free to adopt any or all of the specialization tracks and certificates depending on their local industry needs. The currently approved specialized tracks are listed in Table 1. Twenty-three Florida colleges offer the A.S. ET degree and college credit certificate (CCC) with others planning to adopt the program in the near future.



The A.S. ET degree is part of a statewide, unified pathway that includes the high school technology and manufacturing programs, career academies, incumbent worker training, post-secondary technical training, and bachelor's degree programs. Embedding the MSSC Skill standards into the ET Core provides an industry-relevant articulation pathway from secondary programs that addresses these same industry skills. It also provides a pathway for incumbent workers to gain college credit through this credential.

These articulated pathways were crafted by FLATE as the first-of-its-kind Statewide Articulation Agreement based on this state-approved Industry credential. The agreement was approved by the FLDOE and has been ratified and reaffirmed (2015) by the colleges and their industry partners. This statewide articulation agreement and tight alignment of academic programs and industry credentials also provides an accelerated path to completion of the A.S. ET degree.

This material is based upon work supported by the National Science Foundation and revised, updated and disseminated with support from funds available under the Strengthening Career and Technical Education for the 21st Century Act of 2018 (Public Law 115-224) and the Florida Department of Education.

The A.S. ET degree and its pathways are endorsed by the National Association of Manufacturers (NAM) in their Skill Certification System (SCS) and are reviewed every 3 years in Florida by legislative mandate by educators and industry panels. They have been identified as a national model for successful career pathways.

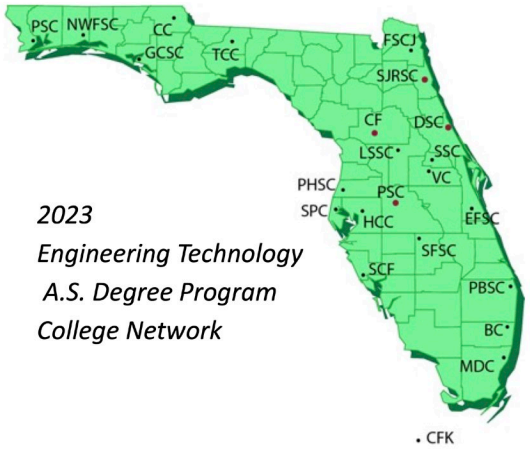
To ensure the success of this unified curriculum plan, FLATE, in partnership with the FLDOE, also developed curriculum frameworks for high school as well as Post-Secondary Career Certificates that align with the MSSC CPT and provide an accelerated pathway to completion of the A.S. ET. These frameworks are available for adoption by any Florida high school or Technical College. In addition to the Advanced Manufacturing program, two other high school programs have aligned to the MSSC CPT with their individual statewide articulation agreements.

All Engineering Technology A.S. Degree holders can transfer seamlessly to several Bachelor of Applied Science (B.A.S.) Degrees offered in Florida's universities and colleges. The state-mandated 2 + 2 agreements apply 60 credit hours of the A.S. degree directly to any of the 4-year B.A.S. Programs. Alternatively, A.S. ET graduates can easily transfer to various B.S.E.T. degrees in Florida. The B.S.E.T. requires additional general education credits and may require technical prerequisites for some options.

Table 1. A.S. Engineering Technology Degree Specializations & Related Certificates (2023)

SPECIALIZATION (11)	COLLEGE CREDIT CERTIFICATES (18)
Advanced Manufacturing	Automation (12 credit hours) Lean Manufacturing (12 credit hours) Mechatronics (30 credit hours) Pneumatics, Hydraulics & Motors for Manufacturing (12 credit hours)
Advanced Technology	Applied Technology Specialist (16 credit hours) Composite Fabrication and Testing (12 credit hours)
Alternative Energy	Alternative Energy Systems Specialist (18 credit hours)
Biomedical Systems	Medical Quality Systems (12 credit hours)
Digital Design and Modeling	Computer-Aided Design and Drafting (12 credit hours)
Digital Manufacturing	Rapid Prototyping Specialist (12 credit hours)
Electronics	Electronics Aide (12 credit hours)
Mechanical Design & Fabrication	CNC Composite Fabricator/Programmer (12 credit hours) CNC Machinist /Fabricator (12 credit hours) CNC Machinist Operator/Programmer (12 credit hours) Mechanical Designer and Programmer (12 credit hours)
Protection and Control Technology	
Quality	Lean Six Sigma Green Belt (12 credit hours) Six Sigma Black Belt (12 credit hours)
Supply Chain Automation	
NON-SPECIFIC COLLEGE CREDIT CERTIFICATE:	
ET Core (MSSC CPT aligned)	Engineering Technology Support Specialist (18 credit hours)

The A.S. ET Curriculum Frameworks and supporting documentation are posted on FLATE's website: http://fl-ate.org/programs/stackable-credentials/.
Specific offerings at each Florida college are posted here: http://madeinflorida.org/engineering-technology-degree/e-t-overview.



FLATE, part of the FloridaMakes Network (the Manufacturing Extension Partnership Center in Florida), serves Florida to enhance and promote two-year manufacturing technician workforce education programs across the state. To achieve this mission, FLATE works in four major areas: curriculum reform and development; student recruitment and outreach; technician education research; and professional development. FLATE works closely with its educational and industry partners to help with all aspects of program building. For more information about FLATE, please visit our websites: www.flate.org and www.madeinflorida.org or contact Dr. Marilyn Barger, Marilyn.Barger@flate.org.

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