Does this:
- meet FLATE’s ethical expectations?
- build upon and require strong teamwork to accomplish?
- enhance our ability to build bridges among academia and industry partners and stakeholders?
- ensure that the role of community colleges is valued and respected?
- increase FLATE’s leadership in technical education in the State of Florida?
- support our drive toward continuous improvement and augment our ability to be innovative in developing services and products for industry and education stakeholders?
- augment our aptitude for providing resources, opportunities, and
FLATE was envisioned in 2002 under a National Science Foundation Advanced Technological Education (NSF-ATE) planning grant. The Center is an ATE Centers of Excellence in the United States focused on improving science, technology, engineering and math education supporting the technician workforce needs of American advanced and emerging technology industries. FLATE’s work is industry driven and focused in 3 work streams: outreach and recruitment, professional development for educators, and curriculum development and reform.

Impact Locally. Lead Nationally.

- Developed Florida’s Engineering Technology Degree
- Coordinates statewide MFG Day Tours
- Mentor for A.S. manufacturing programs across the US
- Home of the “Made in Florida” outreach campaign
- Provides industry-driven professional development
- Author of award winning national publications
- National leader for manufacturing education
- Coordinated leadership team from HCC, USF and SPC
- Partnerships with FloridaMakes

Advancing Excellence in Engineering & Manufacturing Technology Education

This activity supports FLATE’s vision to be a self sustaining and quality organization.

This work is funded under grant DUE# 1204751 from the National Science Foundation Advanced Technological Education (ATE) program. Opinions and findings expressed herein are those of the authors and do not necessarily reflect the views of the National Science Foundation. © Copyright 2019 FLATE
Industry Partners and their participation in FLATE’s activities and projects is crucial for our success. FLATE’s Industry partnerships manifest themselves in many ways. FLATE has a Florida-based Industry Advisory Committee (IAC). As an NSF ATE Center of Excellence, FLATE also has a National Visiting Committee (NVC) comprised of executive officers of manufacturing companies, state agency and education professionals. Additionally, FLATE has many partnerships with individual companies as well as statewide and regional professional industry organizations for curriculum, outreach and professional development activities and events.

<table>
<thead>
<tr>
<th>FLATE Industry Group</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Visiting Committee meets annually at a Florida manufacturer</td>
<td>Our NVC assesses, advocates, and advises the FLATE team and reports annually directly to NSF.</td>
</tr>
<tr>
<td>Annual Distinguished Service Awardees</td>
<td>Recognition of a partner who strongly supports one of FLATE’s academic partners or programs.</td>
</tr>
<tr>
<td>Regional Manufacturers Association Network</td>
<td>Network organized by FloridaMakes to improve Florida’s manufacturing businesses including workforce education.</td>
</tr>
<tr>
<td>ET College Advisory Committees</td>
<td>23 ET advisory committees have semiannual meetings to support local and statewide ET program curriculum and community outreach.</td>
</tr>
</tbody>
</table>

I am very happy to commit to continuing my service on FLATE’s NVC. I look forward to this new phase of FLATE that will build the capacity of the ET Degree, grow and strengthen the industrial community partnership with FLATE and continue to make Florida’s manufacturing workforce grow to meet our demands for qualified technicians.”
- B. Driggett, Hoerbiger
FLATE’s impact on its educational, industry and workforce stakeholders is captured in a variety of metrics. FLATE data comes from stakeholder and participant surveys, Florida Dept. of Education databases, various web statistics, anecdotal comments, and other sources. These define our activity successes and impact as well as provide feedback for process improvements.

Regional/Statewide Impact:
- Industry defined/endorsed Engineering Technology Degree (AS/AAS) degree approved by FL DOE in May 2007
  21 frameworks for 20 certificates and 11 specializations of the degree
  Developed with 12 partner colleges, 44 Florida manufacturing companies, FL Department of Education, Workforce Florida, Manufacturers Skill Standards Council, Manufacturers Association of Florida, Regional Mfg. Associations
  23 college ET Degree adoptions as of December 2017
  Three articulated high school framework submitted to FL DOE offered to a 124 of schools.
  Automation Production Technician (APT) impacting eight high school programs
  2,062 students enrolled in Engineering Technology college degree programs in 2016-17
  Awarded over $220,000 to ET degree awarding college partners for laboratory upgrades
- Statewide articulation agreement for high school students and incumbent workers for 15 credit hours by achieving MSSC
  Sign MOU with FloridaMakes (FL MEP)
  Provided language for Career Academy legislation and testified before the FL House and Senate subcommittees
  Crafted the award for Banner Center for Manufacturing for related workforce training initiatives (2006-08, $700,000)
  Awarded $1.4 million in additional funding from NSF ATE for requested special projects
  FLATE has been leveraged by its partners to obtain over $80 million in state and local funding
  Provided 9,089 hours of professional development to 3,268 educators and 2,280 workforce, economic and manufacturing personnel in multi-day workshops, presentations, and through online webinars at hundreds of events in Florida, nationally, and worldwide
  Over 100,000 Florida students and educators reached by the Made in Florida (MIF) outreach campaign
  MFG Day Partnership (2013-17) introduced 24,065 students, 1,714 teachers and 1,337 parents and chaperons to Advanced Manufacturing at 1,807 advanced manufacturing tour events in 28 Florida counties
  More than 41 MIF industry-sourced, integrated STEM middle and high school lesson plans
  Recognition program for 3 outstanding educational and industry champions of manufacturing education
  Supported 1,484 middle and high school students in summer STEM robotic camps since 2005
  Awarded 26 statewide recognitions since 2010 including Best Practice and Exemplary Practice Awards

National and International Impact:
Best Manufacturing & Technology Educational Facility in Florida, Florida Career Pathways Best Practice Awards,
“Robotics: A tool for integrating STEM disciplines,” and, “Factors Affecting Engineering Technology Pathways – Sharing real student’s perspectives to help increase recruitment and retention in your program.”
Ten published FLATE Best Practices guides
Over 202,358 individuals received the FLATE FOCUS online newsletters since 2009, with distribution to 2,802 in 2017. The FLATE was viewed nationwide in the U.S. & in 97 countries; winner of 2013 and 2014 APEX Awards for Publication Excellence
- Public dissemination through madeinflorida.org and flate.org websites, blogs, and educator resources at flate.pbworks.com have served over 233,122 visitors to FLATE online resources since 2009
- Model for integrating national skill standards into technician 2-year degree curriculum
- Model for industry endorsed 2-year curriculum for A.S. degrees in Engineering Technologies
- Seamless articulation to Florida BSET and BAS degrees
- National advisory boards for Technical and STEM Education including ATE Centers, NAM, MSSC, NCPN, ACTE, NCATC, and NAM
FLATE has successfully completed a number of projects dealing with curriculum, outreach and professional development. This page highlights some of those projects.

**The High School Technology Initiative (HSTI)** was an NSF funded project housed at USF and HCC to develop and implement curriculum modules amplifying the technology applications of fundamental science and mathematics principles. The modules could be easily integrated into science, math and technology courses and were supplemented with animations and video. Over 400 teachers nationwide were trained to use HSTI materials. These resources are now available on FLATE’s wiki.

**Florida Trend NEXT** was run for 6 years in partnership with Florida Manufacturers. Over the course of the sponsored manufacturing advertising, a total of 22,651 student leads were directly responded to by FLATE, and forwarded to 45 Florida colleges and technical schools. The NEXT advertising directly connected tomorrow’s workforce to advanced manufacturing college and careers, promoting positive awareness of career pathways for Florida’s high tech manufacturing jobs.

**The Bimolecular Identification and Targeted Therapeutics Center** at the University of South Florida was a Florida Department of Education Center for Excellence. Beginning in January 2008, FLATE partnered with BITT to facilitate the workforce development components of BITT for biotechnology technicians. As a result, HCC and other Florida colleges implemented successful A.S. Biotechnology programs and trained educators and workers.

**HAS 200** It is more apparent than ever that America’s technician workforce needs to have more experience in system thinking, the HAS 200 technical education consortium in partnership with SMC Inc has developed curriculum and training resources to help colleges across the country address this demand. This completed $1M, 10 nationwide college partner project puts students in front of an integrated system with hands-on scenarios that develop student system trouble shooting skills.

This activity supports FLATE’s vision to be a self sustaining and quality organization.

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International Programs

FLATE became involved with a number of international organizations to work on programs that provide advanced international professional development for faculty & students in E. T. A.S. Degree programs, strengthen collaborations between community colleges, faculty, & FL Industries.

Florida Energy Systems Consortium defined FLATE as FESC’s core facility for community college technical workforce education development and deployment throughout the state. One of the specific accomplishments of this partnership was the design, development and implementation of an annual Community and State Colleges Energy Education Workshop / Forum. These workshops have been intended to bring educators and industry people from all over Florida together to learn and share ideas and knowledge about energy education and energy industry workforce needs. The grant drew to a close in June 2016.

FLATE Product Display Case

The “Made in Florida” display cabinet showcased parts and products made by companies right here in our state. The visuals the products provided were invaluable in bringing manufacturing to life in the eyes of students. The Florida Manufacturers Display is located at the Hillsborough Community College Brandon campus Student Services Building, adjacent to the manufacturing labs. The items donated by Florida manufacturers were either final or intermediate stage products; something used in the production process or raw materials. These were also used during “Made in Florida” classroom presentations and by students in HCC’s Engineering Technology Program.
FLATE’s evaluation plan consists of 2 interdependent levels – various types of data validate its performance with respect to its past, present and future goals and objectives and an overarching, strategically-oriented process ensures FLATE continues to strive for improvement in our processes and products. FLATE’s strategy is to fully integrate its NSF ATE evaluation requirements with the nationally recognized Malcolm Baldrige (Florida Sterling) Quality Process. Actions and activities are driven by opportunities identified by stakeholders. Our plan is cyclic with three phases each with several components.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>140</td>
<td>42</td>
<td>56</td>
<td>63</td>
<td>84</td>
<td>91</td>
</tr>
<tr>
<td>Strategic Planning</td>
<td>100</td>
<td>40</td>
<td>50</td>
<td>45</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Customer Focus</td>
<td>100</td>
<td>40</td>
<td>40</td>
<td>50</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Measurement, Analysis, and Knowledge Management</td>
<td>100</td>
<td>25</td>
<td>30</td>
<td>40</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Workforce Focus</td>
<td>100</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Results</td>
<td>100</td>
<td>126</td>
<td>126</td>
<td>144</td>
<td>162</td>
<td>169</td>
</tr>
<tr>
<td>Total</td>
<td>360</td>
<td>333</td>
<td>362</td>
<td>412</td>
<td>501</td>
<td>530</td>
</tr>
</tbody>
</table>

**FLATE’s 2018 Strengths**

**Strong environment for two-way communication & stakeholders engagement**

Activity and performance improvements based on stakeholder/customer feedback

Operational effectiveness & strategy implementation
The NSF ATE Joint Exhibits are geared to promote the NSF ATE mission through dissemination of information and showcasing of ATE programs, products, expertise, and services at key regional and national conferences. The ATE Centers and projects display at 8-11 joint exhibit events per year. These exhibits have proven to be an effective mechanism to provide highly visible, coherent impact to a variety of regional and national stakeholders.

<table>
<thead>
<tr>
<th>Year</th>
<th># of Events Per Year</th>
<th># of Centers Participating</th>
<th># of Participants by Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 (34 centers)</td>
<td>2</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>2009 (36 centers)</td>
<td>6</td>
<td>18</td>
<td>47</td>
</tr>
<tr>
<td>2010 (36 centers)</td>
<td>7</td>
<td>23</td>
<td>84</td>
</tr>
<tr>
<td>2011 (40 centers)</td>
<td>7</td>
<td>28</td>
<td>86</td>
</tr>
<tr>
<td>2012 (48 centers)</td>
<td>6</td>
<td>26</td>
<td>66</td>
</tr>
<tr>
<td>2013 (42 centers)</td>
<td>9</td>
<td>18</td>
<td>67</td>
</tr>
<tr>
<td>2014 (42 centers)</td>
<td>10</td>
<td>20</td>
<td>71</td>
</tr>
<tr>
<td>2015 (42 Centers)</td>
<td>10</td>
<td>16</td>
<td>54</td>
</tr>
<tr>
<td>2016 (43 Centers)</td>
<td>11</td>
<td>21</td>
<td>60</td>
</tr>
<tr>
<td>2017 (42 Centers)</td>
<td>12</td>
<td>23</td>
<td>63</td>
</tr>
<tr>
<td>2018 (34 Centers)</td>
<td>12</td>
<td>10</td>
<td>36</td>
</tr>
</tbody>
</table>

“Participation in the ATE-Center NSF joint displays indicates a strength in breadth of technical centers but also allows them to exchange ideas, materials and possible future collaboration with each other.” - Mary Jane Kurtz

“It is a great team effort and I always learn something new about the different ATE centers every time I participate. That allows me to connect my contacts with other centers that could be useful to them.” - Billie Copley
FLATE’s online free Educational resources are intended to increase student’s awareness and interests in the field of manufacturing and all the careers it represents. It features STEM centered, industry-connected lesson plans for K-12 school teachers and their students. Includes support materials for tours to high tech industries, and resources to help engage and recruit girls to STEM curriculum and support technology career pathways. In addition, educators can keep current with the latest National and International advanced technology education conference materials and presentations.

<table>
<thead>
<tr>
<th>Educational Resources</th>
<th>Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIF Lesson Plans for:</td>
<td></td>
</tr>
<tr>
<td>• Elementary</td>
<td>Made in Florida STEM Lesson Plans Education</td>
</tr>
<tr>
<td>• Middle</td>
<td>For Elementary, Middle, High School</td>
</tr>
<tr>
<td>• High School</td>
<td></td>
</tr>
<tr>
<td>• Career &amp; Education Planning</td>
<td>Career Education Resources</td>
</tr>
<tr>
<td>• Girls STEM Resources</td>
<td>W Titans STEM Resources for Girls</td>
</tr>
<tr>
<td>• Modules for Adv.</td>
<td></td>
</tr>
<tr>
<td>• Technological Education</td>
<td>Modules for Advanced Technological Education</td>
</tr>
<tr>
<td>• Presentations &amp; Webinars</td>
<td></td>
</tr>
<tr>
<td>• Professional Development for</td>
<td></td>
</tr>
<tr>
<td>• Teachers</td>
<td></td>
</tr>
<tr>
<td>• Industry Tour</td>
<td></td>
</tr>
<tr>
<td>• Camp Resources</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MIF Wiki Resources</th>
<th>Online Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>Wiki-Middle School Challenges</td>
<td>356</td>
</tr>
<tr>
<td>Wiki-High School Challenges</td>
<td>250</td>
</tr>
<tr>
<td>Wiki-Career &amp; Education</td>
<td>195</td>
</tr>
</tbody>
</table>
Industry, colleges, FLATE, and the Florida Department of Education partnered to produce the Engineering Technology A.S. Degree Program. It has 3 components: (I) general education (II) an ET technical core and (III) specialization tracks (10) that address regional industry needs. The ET Core aligns with the Manufacturing Skills Standards Council Certified Production Technician (MSSC-CPT) national certification, which articulates 15 credit hours of the ET Core. The A.S. ET Degree articulates seamlessly to Florida’s B.S.E.T. degrees. This industry validated, credentialed based articulated degree is a model for national implementation of accelerated workforce education strategies. In fall 2017, twenty-two state and community colleges will offer the A.S. ET degree.

**Colleges Offering the A.S. ET Degree**

1. Broward College (BC)
2. Central Florida College (CCF)
3. Chipola College (CC)
4. Daytona State College (DSC)
5. Eastern Florida State College (EFSC)
6. Florida State College at Jacksonville (FSCJ)
7. Florida Gateway College (FGC)
8. Florida Keys Community College (FKCC)
9. Florida SouthWestern State College (FSWSC)
10. Gulf Coast State College (GCSC)
11. Hillsborough Community College (HCC)
12. Lake Sumter State College (LSSC)
13. North Florida Community College (NFCC)
14. Northwest Florida State College (NWFSC)
15. Palm Beach State College (PBSC)
16. Pasco Hernando State College (PHSC)
17. Pensacola State College (PSC)
18. Polk State College (PSC)
19. Seminole State College (SSC)
20. South Florida State College (SFSC)
21. State College of Florida-Manatee (SCF)
22. St. Petersburg College (SPC)
23. Tallahassee State College (TSC)

**ET Specializations**

- Advanced Manufacturing
- Advanced Technologies
- Alternative Energy Systems
- Biomedical Systems
- Digital Design & Modeling
- Digital Manufacturing
- Electronics
- Mechanical Fabrication & Design
- Protection & Control Technology
- Quality

This activity supports FLATE’s vision to be a self-sustaining and quality organization.

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Skills attainment and documentation in Career and Technical Education at all levels are evolving to include alignment to industry-validated credentials. In 2007, FLATE included such an alignment of the ET Technical Core to MSSC’s Certified Production Technician (CPT) Credential. Credential alignment also provides uniform accelerated pathways into post-secondary degree programs from high schools. FLATE has also aligned industry credentials to the second year skills in some ET degree specializations. These credentials are endorsed by the Manufacturing Institute as part of their Stalckackable Certification System. Florida is second in the nation for number of MSSC CPT credentials.

<table>
<thead>
<tr>
<th>AS Engineering Technology Degree</th>
<th>Credits</th>
<th>Certifications Aligned &amp; Articulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General Education</td>
<td>15-18</td>
<td></td>
</tr>
<tr>
<td>II. ET Technical Core</td>
<td>18</td>
<td>MSSC CPT &gt; Technical Core</td>
</tr>
</tbody>
</table>
| III. Specialization (2nd year)  | 24-27  | NIMS > Mechanical Fabrication & Design  
|                                 |        | ETA > Electronics (coming soon)     
|                                 |        | AWS > (new specialization)           |
| I + II + III                    | 60     | A.S. E.T. Diploma + MSSC + others   |
The **Forum on Engineering Technology** (E.T. Forum) is an important vehicle for bringing together Florida’s diverse and geographically dispersed community. FLATE works within this organization to strengthen the consortium, share its administrative activities and projects, provide professional development, bring industry and academia together, and engage in statewide curriculum reform. It’s a strong venue for sharing college program achievements, issues and concerns across Florida. Over the years, it has become a collaborative community of practice. The Forum meets twice a year; the 2-day meeting has met forty-two times since 1996 at over 23 different Florida colleges.

<table>
<thead>
<tr>
<th>COLLEGE HOSTS</th>
<th>DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Florida College</td>
<td>2007, 2017</td>
</tr>
<tr>
<td>Chipola College</td>
<td>2017</td>
</tr>
<tr>
<td>Eastern Florida State College</td>
<td>2007</td>
</tr>
<tr>
<td>Florida Gateway College</td>
<td>2011</td>
</tr>
<tr>
<td>Florida Keys Community College</td>
<td>2015</td>
</tr>
<tr>
<td>Florida State College at Jacksonville</td>
<td>2003, 2010</td>
</tr>
<tr>
<td>Hillsborough Community College</td>
<td>2005, 2013</td>
</tr>
<tr>
<td>Lake Sumter State College</td>
<td>2016</td>
</tr>
<tr>
<td>Miami Dade College</td>
<td>2001</td>
</tr>
<tr>
<td>Palm Beach State College</td>
<td>2004</td>
</tr>
<tr>
<td>Pensacola State College</td>
<td>2008</td>
</tr>
<tr>
<td>Polk State College</td>
<td>2009, 2014</td>
</tr>
<tr>
<td>Seminole State College</td>
<td>1997, 2008</td>
</tr>
<tr>
<td>South Florida State College</td>
<td>2018</td>
</tr>
<tr>
<td>Suncoast Technical College</td>
<td>2010</td>
</tr>
<tr>
<td>Tallahassee Community College</td>
<td>2010</td>
</tr>
<tr>
<td>University of Central Florida</td>
<td>1996</td>
</tr>
</tbody>
</table>

**ET Forum General Meeting Cumulative Satisfaction Rating 2013-2019**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum</td>
<td>4.5</td>
</tr>
<tr>
<td>Professional Development</td>
<td>4.7</td>
</tr>
<tr>
<td>Recruiting</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Changes were made to the survey instruments so earlier data is not compatible with the current survey questions or survey forms.

Based on 437 returned surveys

Rating Scale: Excellent-5, Very Good-4, Good-3

---

Here is what participants have to say:

“The E.T. Forum is great for networking opportunities and sharing ideas. It is great being with peers that actually understand the challenges we face in public education.”

“This forum is essential for maintaining awareness of state changes and plans for Associate degrees. It is necessary in order to see demonstrations of manufacturing latest tools to improve classroom instruction. It is necessary as a place to exchange ideas and hear of solutions to common problems and issues.”

This activity supports FLATE’s vision to be a self-sustaining and quality organization.

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The Toothpick Factory® is a hands-on activity, set in a manufacturing context, that stimulates discussion and awareness about a wide range of soft skills that are essential in today’s work and personal relationships. These are workplace standards of behavior needed by employees to interact and cooperate effectively with co-workers. The hands-on activity engages students in a non-threatening simulation so they can focus on teamwork and communication skills.

**Objectives**
- How to be a good team player
- How to adapt to change
- How to lead others
- How to communicate effectively
- How to offer & receive feedback

**Strategy**
Structured to put participants in a “real world” scenario where each one has a specific role in the manufacturing process.

<table>
<thead>
<tr>
<th>TPF Kits Sales since 2009</th>
<th>393</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft skills workshops since 2009</td>
<td>Over 30 professional development event all over U.S.A.</td>
</tr>
<tr>
<td>Impact since 2009</td>
<td>More than 791 students &amp; educators &amp; Industry leaders</td>
</tr>
</tbody>
</table>

This activity supports FLATE’s vision to be a self sustaining and quality organization.
FLATE Professional Development for technical faculty and educators in STEM curriculum provides opportunities to develop, refine or certify their knowledge base within manufacturing and/or its related enabling technologies and educational pedagogies. Workshops take advantage of the summer break for educators, and are offered by request throughout the year to college faculty and K-12 teachers. 2016 workshops included the 5th annual FLATE Summer Institute (Manufacturing Careers), 7th annual FLATE Summer Camp for Teachers (Lego Mind Storms), Alternative Energy camp and tours to manufacturing companies. Workshops are filled with real and fun hands on activities and industry tours.

<table>
<thead>
<tr>
<th># Of Hours of Professional Development Provided</th>
<th># Of Educators that Participated</th>
<th># Of Workforce, Economic &amp; Manufacturing Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>40,327</td>
<td>31,703</td>
<td>11,592</td>
</tr>
</tbody>
</table>

Data collected at hundreds of events in Florida, nationally & worldwide from 2008-2017

“Great workshop with a wonderful facilitator.”

“The resources that were shared will be very helpful”

“I enjoyed doing all the hands on activities!”

Discover the latest FLATE PD Workshops at www.fl-ate.org
An important part of FLATE’s NSF mission is sharing our learning and expertise through dissemination. To this end, FLATE began work in 2010 on an “FLATE Best Practices Guide” series to share FLATE-developed documents and outreach structure for FLATE camps, tours, newsletter, and strategic partnership building strategies. These booklets are a compilation of “best practices” based on our experiences, focus groups, and stakeholder feedback and are available in an online print-ready format to facilitate wide range dissemination and as online flip-books on our FLATE home page.

- Forging Positive Partnerships in Florida
- Statewide Curriculum & Degree Program Review Processes
- FLATE Communications Program
- Robotics Camp Survival Guide (Updated)
- Curriculum Alignment to Credentials
- Engineering Technology High School Camp
- Industry Tours for Students
- Recruiting & Retaining Girls in STEM
- Professional Development
- Project Highlights (Updated)

This activity supports FLATE’s vision to be a self sustaining and quality organization.
Career and Technical Student Organizations create environments where students aspire to be the best in their advanced technology careers. As members, students not only develop technical skills, but also leadership qualities, professionalism and teamwork skills as demonstrated in the local, regional, state national and international competitions. FLATE supports students and educators in local, regional, state, national and international competitions.

FLATE Involvement

- Competition sponsorship
- Coaching and mentoring
- Competition judging
- Host events and tournaments
- Recruit sponsors
- Competition development
- Logistics
- Support team equipment/supplies
- Provide technical expertise
- Outreach activities
- Teacher professional development

This activity supports FLATE’s vision to be a self sustaining and quality organization.

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Summer Robotics Camps capture the interest and imagination of middle and high school students by following current exciting trends in robotics and automated systems. FLATE’s robotics camps are geared to provide exciting opportunities for students to explore their interest in STEM and robotics and learn their application in high-tech manufacturing operations. The summer camp curriculum is a mixture of Lego educational materials, STEM subjects and modern manufacturing information conducted in an environment of competitive problem solving. More information at fl-ate.org/programs/summer-camps/

Parents Share:
"It gave my daughter a reason to practice math and planning. She has trouble with executive functions and this was a great way to teach both!”

“You are inspiring the future generation of engineers!”

“This camp is going to give my daughter the needed boost of confidence as she joins the STEM program.”

Parents Share:

Kids Share
"I think the best part if the camp was the challenges we participated in.”

"I LIKE THAT THIS CAMP SHOWED US STEP BY STEP HOW TO PROGRAM THE ROBOT AND PIECE IT TOGETHER!”

“I learned MORE in this camp than I ever learned in the three years of high school robotics.”

Camps are typically five days in length and include classroom & lab exercises, team experiences, field trips, and fun!

<table>
<thead>
<tr>
<th>2005-2018</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of campers @ FLATE-HCC</td>
<td>1,370 Students</td>
</tr>
<tr>
<td>84 Different STEM Summer Camps</td>
<td>Co-ed Introductory and Intermediate Robotics, Girls Only, and High School Engineering Technology Camps at Hillsborough Community College and St. Petersburgh College</td>
</tr>
<tr>
<td>Serving Mainstream &amp; Special Student Populations</td>
<td>STEM Career Academies, PACE Center for Girls, CROP at HCC, Middle and High School students</td>
</tr>
<tr>
<td>31 Community Partnership STEM and Robotics Camps</td>
<td>CareerSource Pinellas, College of Central Florida (CCF), Escambia County School District, Florida Gateway College (FGC), Institute for Human and Machine Cognition (IHMC), Palm Beach State College, Pineview School, Dream It, Do It Motorola Foundation, St. Pete College, Duval County Schools, Lake Sumter State College, Withlacoochee Tech, Miami-Dade Schools</td>
</tr>
</tbody>
</table>

This activity supports FLATE’s vision to be a self sustaining and quality organization.
FLATE has a diverse portfolio of resources that are targeted to recruit girls and women in STEM. The Center has designed and formulated numerous projects and programs designed to spark females’ interest in STEM fields and to encourage them to pursue engineering college and career pathways.

**Women In MFG Video, Interviews & Curriculum**

FLATE’s newest “Women in Manufacturing” video serves as an effective tool in highlighting the role and significant contributions of women who have made remarkable strides in the Manufacturing workforce. The video discusses pertinent issues about the role women have played in the manufacturing industry.

FLATE has also built a Teacher’s Guide featuring three comprehensive curriculum and lesson plans that addresses issues outlined in the Women in Manufacturing video. The curriculum/lessons:

- align with the new Florida Standards (SP.PK12.US.3.3b)
- designed to serve as teaching aids to help educators formulate lessons
- provide a first-hand look at real-life scenarios surrounding gender bias in the hiring process

**BEST PRACTICES Guide**

**Recruiting Girls For STEM Careers**

This guide is designed to provide resources and practical information for educators and parents on how to encourage girls and make them aware of the many high-wage high-tech careers available to them.

**Girls Energy Camps**

The Women’s Solar Power Camp at Lake Sumter State College (LSSC) had a total of 19 students, grades 8th through 12th, that participated. This event was sponsored by the national science foundation which goal is to promote and recruit girls in the STEM field. During the camp, the girls had the opportunity to explore the innovative engineering technology field of solar energy.

FLATE offers webinars and workshops for STEM educators that looks at “what works” from the unique perspective of teachers in the field at progressive levels of education: Elementary, Middle, High School, and College programs and outcomes.
FLATE’s Distinguished Manufacturing Service Recognition Program, hosted by FACTE, brings recognition to both secondary and post-secondary educators as well as recognizes key personnel for outstanding contributions to promote technology education and career awareness in support of manufacturing. FLATE’s Industrial Advisory Committee and FACTE.

**2007—2018 FLATE AWARDEES**

**Secondary Educator of the Year Award**
- Ted Norman
- Gil Burlew
- Jim Mathews
- David Lintner
- Greg McGrew
- Steve Portz
- Bruce (Dale) Toney
- Russell Henderlite
- Elizabeth Simpson
- James Maynard
- Ted M. Missildine

**Post-Secondary Educator of the Year Award**
- Meer Almeer
- Ed Niespodziany
- Norm Brahs
- Dean Eavy
- Robert Deckon
- Adrienne Gould-Choquette
- Alessandro Anzalone
- Aubri Hanson
- Kevin Finan
- Sam Aljani
- Shirley Dobbins

**Distinguished Manufacturing Service Award**
- Steve Lezman
- Anthony Fedd
- Mike Ennis
- Art Hoelke
- Mark Snyder
- Peter Buczynsky
- Roy Sweatman-SMT
- Ken Jurgensmeyer
- Jerry Custin
- Robert Adamiak
- C.A. Vossberg

This activity supports FLATE’s vision to be a self-sustaining and quality organization.

This work is funded under grant DUE# 1204751 from the National Science Foundation Advanced Technological Education (ATE) program. Opinions and findings expressed herein are those of the authors and do not necessarily reflect the views of the National Science Foundation. © Copyright 2019 FLATE
FLATE’s Communications Program informs state and national stakeholders, including local and regional media, about the Center’s multi-faceted communications initiatives. The Center’s strategic communications program is designed to reflect and match FLATE’s vision “to be Florida’s leading resource for education and training expertise, leadership, projects and services to promote and support the workforce in the high performance production and manufacturing community.” The Center uses print, web, and social media tools to disseminate information about its activities and projects to key stakeholders. For more information visit www.fl-ate.org/news.

**2017 Newsletter Pageviews Per Month**

<table>
<thead>
<tr>
<th>Month</th>
<th>Page Views</th>
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<tbody>
<tr>
<td>JAN</td>
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<tr>
<td>FEB</td>
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<tr>
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<td>2,499</td>
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<td>MAY</td>
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<td>OCT</td>
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<td>NOV</td>
<td>2,686</td>
</tr>
<tr>
<td>DEC</td>
<td>1,702</td>
</tr>
</tbody>
</table>

**Press Materials**

**Description**

**NEWSLETTER**

Published since Spring 2007, and distributed to nearly 3000 individuals in Florida and across the nation. Readership comprises of an eclectic mix of government, education and industry partners. The FLATE Focus is also a two-time Apex Award winner. You can read the newsletter blog at [http://flate-mif.blogspot.com](http://flate-mif.blogspot.com).

**PRESS RELEASE & NEWS ALERTS**

FLATE frequently reaches out to its local/statewide stakeholders and press contacts using web 2.0 tools. Press Release & news alerts are an effective mechanism in keeping stakeholders informed and engaged in FLATE’s professional development, educational and outreach initiatives. Read the latest new release and alerts at FLATE’s Press Room: [http://pressroom.prlog.org/FLATER](http://pressroom.prlog.org/FLATER).

**SOCIAL NETWORKING**

To build a common platform and crosswalks for students, educators and industry engaged in manufacturing/technician education & training to freely interact, FLATE maintains social profiles on various sites. Search “Made in Florida” on the following networks for more information.

- Facebook
- Twitter
- LinkedIn
- FLATE Mif
- Youtube

**MANUFACTURING NEWS**

Highlights statewide & national industry-related news, and are published in the FLATE’ Focus.

**MEDIA**

Organizational information, current and future

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This activity supports FLATE’s vision to be a self-sustaining and quality organization.

www.fl-ate.org | www.madeinflorida.org | www.flate.pbwiki.com | www.flate-mif.blogspot.com | flate@fl-ate.org

This work is funded under grant DUE# 1204751 from the National Science Foundation Advanced Technological Education (ATE) program. Opinions and findings expressed herein are those of the authors and do not necessarily reflect the views of the National Science Foundation. © Copyright 2019 FLATE
“Fl-ate.org”—FLATE’S homepage has been live since 2003, and was relaunched in 2015. The user-friendly website serves as a storehouse of information, and is a portal for accessing FLATE’s curriculum & professional development resources. The website is also one of the primary vehicles in showcasing ongoing FLATE/Manufacturing-related activities, events, and accolades.

FL-ate.org Resources

- Engineering Technology Education
- Videos
- News, Events & Publications
- Committees & Partners
- FLATE Focus/News
- Baldrige/Sterling Evaluation Process
- Corporate Information (Mission/Vision)
- Professional Development Opportunities

MadeInFlorida.org Resources

- Florida Manufacturing Overview
- Robotics Camp
- Employee Interviews
- Links to MFG Exploring Websites
- E.T. Degree Resources
- Salary/Wages Information
- Florida Manufacturing Facts
- Outreach Kit
- Manufacturing Careers & Pathways
- Classroom Learning Resources
- Outreach Publications
- Links to MFG Careers Information
- “Made in Florida” Video
- FLATE Contact for Assistance

Made in Florida

Website that tells you all the COOL stuff that’s made in your backyard!

“MadeFlorida.org” is FLATE’s dedicated outreach website launched in 2005. The website is a rich storehouse of information connecting students, parents and educators to the real world of manufacturing.

What others are saying about the Made in Florida site

“Made in Florida” provides comprehensive promotion and connection for Florida’s advanced manufacturing industries, K-20 technical educators, and students.
FLATE’s Manufacturing Day strategy and cohesive partnerships with regional organizations across Florida has helped build an effective model in Florida that has, over the years, enabled greater involvement and statewide participation of industry and educational partners in MFG Day tours and events. The benefits of the coordinated individual events have been amplified significantly as all stakeholders stand to benefit from this large-scale coordinated activity. The student-centered activities have spawned new partnerships, supported increased public awareness and publicity, and initiated statewide, shared celebrations of manufacturing. More information about MFG Day and FLATE’s strategy are outlined at: http://mfgday-fl.com

**INDUSTRY HOSTS/GUIDES:** 95% stated that the tour was a good use of their company time and resources. “anytime we can show students the modern face of manufacturing it strengthens our future.”

**TEACHERS/PARENTS:** 100% agreed the tour helped them understand high-tech jobs and careers available in Florida.

**STUDENTS:**
- Nearly 89% of students stated the tour helped them understand how STEM subjects are applied in advanced manufacturing industries.
- Approximately 92% of surveyed students stated they would recommend other students have the same opportunity of this tour.
- Nearly 94% said that the tour gave them new information about careers in advanced manufacturing.

"I would love to work here..."  
"The people were engaging..."  
"I enjoyed the hands-on experience."

This activity supports FLATE’s vision to be a self sustaining and quality organization.

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Made in Florida
Industry, Educators and Students
Connecting Manufacturing Excellence since 2004

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