BrewTech
Engineering Academy

Mr. Steve Ballard - Instructor
Engineering Academy

- Four-year sequence of courses which introduces students to the scope, rigor, and discipline of engineering should they decide to enter a four-year college engineering discipline.
- Students are exposed to different engineering skills allowing them to make informed choices about opportunities in engineering careers.
- Students utilize computer skills and software to design products and solve problems as they explore different areas of engineering.
Engineering Academy

**CORE**

9th - Principles of Engineering  560016
10th - Intro to Engineering Design  560015
11th - Engineering Research & Design  560014
12th - Senior Career Path Project  560111

**Electives**

Introduction to Robotics  540031
Robotics Applications  540032
Basic Programming for Engineers  560030
Engineering Goals

- **Recruit** students to pursue careers in engineering and engineering technology.
- **Expand** the participation of women and minorities in the study of engineering.
- **Optimize** the quantity and quality of engineers entering the American workforce.
- **Develop** a technologically enriched background.
- **Exposé** students to the various fields of engineering.
- **Heighten** appreciation for the correlation between classroom, lab, and field studies.
- **Enhance** students’ written and oral communication skills.
- **Strengthen** basis of problem solving and teamwork skills.
Student Supplies & Fees

◆ Fees:
  ▪ Engineering Class: $25.00
  ▪ Robotics Class: $25.00
  ▪ TSA Fee: $25.00
  ▪ Engineering Academy Tee $18.00 SS / $22.00 LS

  Note: BrewTech is cashless and accepts payments for academic fees only through the MySchoolBucks App.

◆ Supplies:
  ▪ 1 ½ inch BLACK binder w/ clear sleeved front
  ▪ 16 GB jump or thumb drive
  ▪ A ream of copy paper
Student Expectations

- Service Hours – Volunteering for Engineering Events
- Create & Update Engineering Notebook
- Class Participation
- Assignments Completed On Time
- ON TIME IS LATE
- Good Attitude & Good Conduct
- Teamwork
- Respect Others, Time and Property
Engineering Field Trips

U of Alabama E-Day
Postponed until 2022

Auburn University E-Day
February 2022
Student Engagement

ALABAMA TSA
Technology Student Association

VEX Robotics Competition Tipping Point 2021-2022

WELCOME TO ALABAMA TSA
A Career Tech Student Organization Focused On STEM Education And Career Development

Providing the tools to inspire the problem solvers of tomorrow.
Engineering Activities

Technology Students Association (TSA)

- National organization of more than 250,000 middle & high school students who aspire to be or enjoy the fields of engineering and technology.
- Offers leadership training through activity opportunities in technology, innovation, design & engineering.
- TSA honor cord can be earned for graduation.
- **State Officers** - Robert Parker, President (Last year, Emma Rountree, Madison Morgan and Parker Schell served as state officers.)
- **State Meeting** - April 12-13 (Montgomery)
- **National Meeting** - June 26-30 (Dallas)

Engineering Activities

RAM Robotics & VEX Competitions

- VEX Robotics is the largest middle and high school robotics program globally with more than 18,000 teams from 40 countries playing in over 1,350 competitions worldwide.
- Students build innovative robots and compete year-round.
- BrewTech has qualified a robot for the VEX Worlds competition for the past 7 years - the only Alabama school to do so!
- VEX Robotics honor chord can be earned for graduation.
- **Local/Regional Competitions** on Saturdays
- **State Competition** - Feb/March (Auburn)
- **World Competition** - May (Dallas)
BrewTech Engineering wants every student to be able to participate in all activities and trips regardless of financial ability. The parents raise funds to help keep costs to students to a minimum so to help expand everyone’s opportunity to attend and participate.

Please support these efforts!

- Robotic team registration at competitions ($50-$150 per robot)
- Travel expenses ~ transportation & hotel
- VEX Robotic parts
- TSA competition materials

**Fundraising:**
- Program Fees
- Activity Fees
- Fundraising Participation
- Sponsorships
- Donor Solicitations

**Volunteering:**
- BrewTech Robotics “Bots in the Back” Events
- Bots at BrewTech 2021 Competition (NOV)
- Carpooling to out-of-town competitions
- Field Trip / Competition Chaperones
- Engineering Awards Dinner (MAY)
# Important Dates

**2021-2022**

<table>
<thead>
<tr>
<th>DATE</th>
<th>DAY</th>
<th>EVENT</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>SEP 29</td>
<td>WED</td>
<td>Engineering / Activity Fees Due (MySchoolBucks)</td>
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<tr>
<td>SEP 29</td>
<td>WED</td>
<td>Engineering T-Shirt Sales Close (PTSA MemberHub Store)</td>
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<tr>
<td>OCT 16</td>
<td>SAT</td>
<td><strong>Bots at the Fair – 1st Competition</strong></td>
<td>Garrett Coliseum</td>
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<tr>
<td>OCT</td>
<td></td>
<td>U of A Engineering Day / POSTPONED</td>
<td>Tuscaloosa</td>
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<tr>
<td>OCT 20</td>
<td>SAT</td>
<td><strong>Match on the Mountain – 2nd Competition</strong></td>
<td>Vestavia</td>
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<tr>
<td>NOV 20</td>
<td>SAT</td>
<td><strong>Bots at BrewTech Robotics Competition – 3rd Competition</strong></td>
<td>BTMHS</td>
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<tr>
<td>FEB</td>
<td>TBA</td>
<td>Auburn Engineering Day / Field Trip or Virtual?</td>
<td>Auburn</td>
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<tr>
<td>FEB</td>
<td>TBA</td>
<td>State VEX Competition (Auburn)</td>
<td>Auburn</td>
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<tr>
<td>APR 12-13</td>
<td>TUE-WED</td>
<td>State TSA Conference (Montgomery)</td>
<td>Montgomery</td>
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<td>MAY 3-10</td>
<td>TUE-TUE</td>
<td>VEX World Championship (Dallas)</td>
<td>Dallas</td>
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<tr>
<td>MAY</td>
<td>TBA</td>
<td>BTMHS Engineering &amp; Robotics Awards Dinner</td>
<td>Montgomery</td>
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<td>JUN 26-30</td>
<td>SUN-THU</td>
<td>TSA National Conference</td>
<td>Dallas</td>
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*“Bots in the Back” event dates will be announced as they are scheduled.*
Engineering T-Shirt
2021-2022

https://brewtech.memberhub.com/store

Short Sleeve $18 | Long Sleeve $22 | 2XL & 3XL +$2
Social Media

BrewTech TSA
- Public group: 228 members
- Joined
- Invite
- Topics, Photos, Events, Files

BrewTech Robotics
- Public group: 215 members
- Joined
- Invite
- Topics, Photos, Events

Alabama Technology Student Association - TSA
- Computer Company
- Contact Us
- alabamatsa.rocks

Technology Student Association (TSA)
- Science, Technology & Engineering
- Contact Us
- www.tsaaweb.org
- Followed by Steve, LeAnne, Chandler and 8,041 others

BrewTech PTSA
- Public group: 735 members
- Manage
- Invite
- Rooms, Announcements, Topics