

BrewTech Engineering Academy

Engineering/ TSA / Robotics / Electrathon

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DESCRIPTION

- Four year sequence of courses which introduces students to the scope, rigor, and discipline of engineering prior to entering 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.

CORE	Principals of Engineering	9 th	560016
	Intro to Engineering Design	10 th	560015
	Engineering Research & Design	11 th	560014
	Senior Career Path Project	12 th	560111
ELECTIVE	Introduction to Robotics	10 th -12 th	540031
	Robotics Applications	10 th -12 th	540032
	Programming for Engineers	10 th -12 th	560030

ENGINEERING / ROBOTICS FEES*

- Engineering Class Fees \$25.00
- Robotics Class Fees \$25.00
- TSA Fee \$25.00
- Engineering Academy T-Shirt \$18.00 SS / \$22.00 LS

ENGINEERING SUPPLIES

- One 1½ inch Black notebook with a clear sleeve on the front
- One 16-gb Jump Drive
- One ream of Copy paper

STUDENT EXPECTATIONS

- Service Hours – 10 Hours / 9-Week Period
- Class Participation & Assignments Completed ON TIME
- Good Attitude & Good Conduct - Teamwork
- Respect Others, Time & Property - ON TIME IS LATE

IMPORTANT DATES	DATE	DAY	EVENT	Location
	September 29	Wednesday	Engineering / Activity Fees Due (MySchoolBucks)	
	September 29	Wednesday	Engineering T-Shirt Sales Close (PTSA MemberHub)	
	October 16	Saturday	Bots at the Fair VEX Competition	Garrett Coliseum
	October		U of A Engineering Day / Postponed	Tuscaloosa
	October 20	Saturday	Match on the Mountain VEX Competition	Vestavia
	November 20	Saturday	Bots at BrewTech VEX Competition	BTMHS
	February	TBA	Auburn Engineering Day	Auburn
	February	TBA	State VEX Championship Competition	Auburn
	April 12-13	Tue-Wed	Alabama TSA State Conference	Montgomery
	May 3-10	Tue-Tue	VEX Worlds Competition	Dallas
	May	TBA	BTMHS Engineering & Robotics Awards Dinner	Montgomery
June 24-July 1	Thu-Wed	National TSA Conference / Nashville	TBD	

* "Bots in the Back" dates will be announced as they are scheduled

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STUDENT ENGAGEMENT

TECHNOLOGY STUDENTS ASSOCIATION (TSA) www.TSAWEB.org / www.AlabamaTSA.rocks

- **PURPOSE:** National organization of 250,000 middle & high school students who aspire to be in 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.
- **MEETINGS:** Select Wednesday mornings – 8:05 AM
- **EVENTS:**
 - State Meeting – April 13-14 (Montgomery)
 - National Meeting – June 26-30 (Dallas)

RAM ROBOTICS & COMPETITIONS www.ROBOTEVENTS.com / www.roboticseducation.org

- **PURPOSE:** 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. A new game is unveiled each year for which students build innovative robots. BrewTech has had a VEX Worlds qualified robot for the last 7 years – only program in Alabama to do so. VEX Robotics honor cord can be earned for graduation.
- **WORKSHOPS** – After school 3:30 PM–5:00 PM M-TH / Some Saturdays
- **EVENTS:**
 - Regional competitions on Saturdays during the school year
 - State Competition – TBA: March / Auburn
 - World Competition – TBA: May 2022 / Dallas, TX

PARENT ENGAGEMENT

The Engineering Academy has a very high-level of parent engagement due to the nature of the program. We have a parent advisory council that helps manage the various fundraisers and events throughout the year. We also have 2-3 parent meetings to discuss the events and trips associated with the various activities. Please be active and help us support all of our students who want to participate.

FUNDRAISING

- **GOALS:** We raise and spend approximately \$30,000.00 each year for the engineering, technology and robotics programs.
 - Product sales – Rada Cutlery, Mixed Bag, Boston Butts
 - Biscuit concession stand
- **DONATIONS & GRANTS**
 - Individuals, elected officials, etc. / Best Buy Grant, TSA Grant, etc.
- **SPONSORSHIPS:**
 - Engineering Firms & Local Businesses

VOLUNTEERING

- **BOTS AT BREWTECH** – BTMHS VEX Robotics competition – TBA
- **FUNDRAISERS** – Parent chairs for each fundraiser effort.
- **SPONSORSHIP TEAM** – Help to identify and contact potential program sponsors
- **BISCUITS GAMES** – Parents and students needed to work concession stands.
- **CHAPERONES & DRIVERS** – Parent chaperones who are willing to drive to competitions and stay overnight at Bots on the Beach in October and Worlds in April.
- **AWARDS & RECOGNITIONS DINNER** – Parent organizers – TBA