OBJECTIVE

- Develop (those entering grades 7-10) interest and competencies within the STEM fields
- Provide real-world experience and a team-based engineering challenge

This summer camp uses robotics to familiarize students with working on a multi-disciplinary group project. Students form teams with a mentor and take part in a small competition that resembles those of FTC competitions:

- [www.youtube.com/watch?v=KELH-dYS0nQ](https://www.youtube.com/watch?v=KELH-dYS0nQ)
- [www.youtube.com/watch?v=xBt-aijsE88](https://www.youtube.com/watch?v=xBt-aijsE88)

Teams build and design robots that collect waffle balls into three types of goals. Each goal has a different scoring level and difficulty. One goal requires balls to be pushed; one allows balls to be dropped, and one requires balls to be launched.

DAY 1

- **Morning** — Form two groups and attend coordinator-led training in: 1.) Programming, 2.) Electrical/Mechanical
- **Afternoon** — Continue training as needed. Split into teams; each team consists of a mentor (faculty, staff, college student), students from group 1 and students from group 2. Each team has 5-6 students

DAY 2 - 5  *(Each day follows the same pattern.)*

- **Early Morning (Start Up)** — All teams meet to brainstorm and discuss the project. Faculty may address issues discussed during the previous Wrap Up and describe the competition in more detail.
- **Morning to Afternoon** — Teams split up and work individually with mentors.
- **Late Afternoon (Wrap Up)** — Teams meet with coordinators to discuss issues they encountered. Discuss additional training or materials that may be required and future objectives.

DAY 6

- **Morning** — Team scrimmages and finalization of designs
- **Afternoon** — Competition
- **Late Afternoon** — Award Ceremony

**Commuter:** $350 *(includes lunch)*

**Resident:** $500 *(all meals and lodging)*

[www.semo.edu/camps](http://www.semo.edu/camps) *(Search for Robotics.)*