

# THE R.E.E.F.

Robotics

Exploration

Experimentation

Fabrication



## A State-of-the-Art Facility

Newly remodeled and opened in August 2024, The R.E.E.F. (Robotics, Exploration, Experimentation Fabrication) provides **4,831 square feet** of cutting-edge space dedicated to robotics, engineering, and competitive esports. The facility comprises three distinct areas, each designed to foster creativity, collaboration, and technical skill development:

### Main Build Space

A large, flexible area for assembling robots, drones, and other engineering projects. Includes ample workspace and storage.

### Fabrication Lab

A space dedicated to design, prototyping, and fabrication, providing students with the tools to bring their ideas to life.

### Esports Room

Equipped with high-performance gaming rigs and collaborative viewing areas, supporting competitive and recreational gaming.

## Advanced Equipment & Resources

The R.E.E.F. is equipped with state-of-the-art technology to support advanced learning and innovation:

- **Laser Cutter:** For precision cutting and engraving of various materials.
- **CNC Machine:** Enabling computer-controlled milling and machining.
- **Laser Scanner:** For creating accurate 3D models of objects and environments.
- **Comprehensive Toolkit:** A full range of hand tools and electronic components for diverse projects.

## A Legacy of Robotics Excellence

Our Upper School Robotics Team has achieved remarkable success, securing **4 consecutive state championships**. This unprecedented achievement makes us the **only school in Florida** to hold this distinction. Our experienced teachers support and guide students to reach their full potential in competitions and design challenges.

# Curriculum Highlights

## Middle School Courses and Teachers:

- Coding and Robotics Survey - Andrew Forskin
- App Creators - Kristan Davalos
- Computer Science for Innovators - Kristan Davalos
- Introduction to Robotics - Andrew Forskin
- Applied Robotics **\*NEW** - Omar El Hamdani
- Flight and Space - Kristan Davalos
- Esports Classes **\*NEW** - Avery Danforth

## Upper School Courses and Teachers:

- Robotics H - Erik Weidenboerner
- Advanced Robotics - Erik Weidenboerner
- Computer Science A AP - Omar El Hamdani
- Foundations of Programming - Omar El Hamdani
- Intro to Cybersecurity - Omar El Hamdani

# Competitive Teams

Students can participate in various competitive teams, applying their skills and knowledge in exciting real-world challenges:

- **Vex Robotics:** Design, build, and program robots to solve challenges.
- **American Rocketry Team** - Design, build and launch a rocket.
- **\*MATE Robotics:** Design, build, and operate underwater remotely operated vehicles (ROVs).
- **\*Drones:** Explore aerial robotics, drone programming, and competitive flight.
- **\*Esports:** Compete in popular esports titles, fostering teamwork and strategic thinking.

*\*Teams in development*