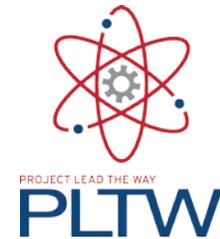




Project Lead the Way

Brother Rice is a partner of **Project Lead the Way (PLTW)**. PLTW a non-profit organization that provides a transformative learning for students and teachers across the U.S.



COURSE DESCRIPTIONS

Introduction to Engineering Design (PLTW 881)

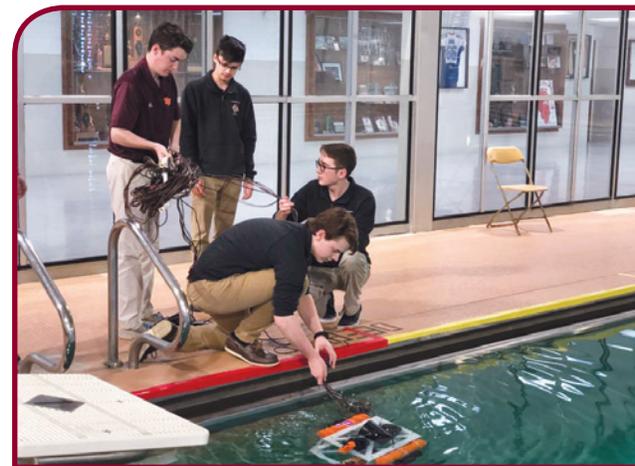
Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, while using an engineering notebook to document their work. (pltw.org)

Principles of Engineering (PLTW 882)

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. (pltw.org)

Aerospace Engineering (PLTW 883)

This course propels students' learning in the fundamentals of atmospheric and space flight. As they explore the physics of flight, students bring the concepts to life by designing an airfoil, propulsion system, and rockets. They learn basic orbital mechanics using industry-standard software. They also explore robot systems through projects such as remotely operated vehicles. (pltw.org)



FACULTY TRAINING

Brother Rice STEM teachers have completed (3) two week/80 hour training sessions by PLTW to be certified to teach Introduction to Engineering Design, Principles of Engineering, and Aerospace Engineering.

ROBOTICS CLUB

- Students use VEX Robotics and Blue Robotics components, motors and programming.
- Compete annually in the Marine Advanced Technology Education (MATE) competition
 - 1st place in regionals and qualified for the International Competition in 2017, 2018 and 2019
 - Top 10 finish at MATE International in 2018
 - 2nd place in Regionals in 2022
- Use CAD software and 3D printers to design unique parts for our robotics projects as well as for various advocacy opportunities. Students printed prosthetic hands for “Love without Boundaries” in 2019 and printed over 200 COVID Face shields for local hospitals in 2020-2021.

NOTABLE STEM COURSE OFFERINGS

AP Biology (824)

AP Chemistry (835)

Physics H (843)

**Dual College Credit with St. Mary's College Winona, MN*

IT Essentials (248)

Code HS (266)

AP Calculus A/B (244)

AP Calculus B/C (245)

Introduction to Engineering Design (PLTW 881)

Principles of Engineering (PLTW 882)

Aerospace Engineering (PLTW 883)

Business Entrepreneurship (954)

Universities attended by Brother Rice PLTW alumni enrolled in STEM degree programs



SCHOLARSHIP OPPORTUNITIES

Colleges and universities across the U.S. recognize and reward PLTW students for their great work. These postsecondary institutions recognize PLTW students with scholarships, admissions preference, course credit, and more. (pltw.org)