Project Lead the Way

An Engineering Program

Starting in the Fall of 2019, the first of four Project Lead the Way (PLTW) Engineering courses, an additional new course each year, will be offered at St John the Baptist Diocesan HS. This program of study empowers students to step into the role of an engineer, adopt a problem-solving mindset, and make the leap from dreamers to doers. The activities not only build knowledge and skills in engineering, but also empower students to develop essential skills such as problem solving, critical and creative thinking, communication, collaboration, and perseverance.

Through both individual and collaborative team activities, projects, and problems, students will solve problems as they practice common engineering design and development protocols such as project management and peer review. In addition, the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized. Ethical issues related to professional practice and product development are also presented. Utilizing the activity-project-problem-based (APB) teaching and learning pedagogy, students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other transferrable professional skills.

At the end of each course students are required to participate in the End-of-Course (EoC) Assessment that offers students a way to prove their strengths and showcase their potential to teachers, higher education institutions, and potential employers. Students can use their test results to bolster college applications or resumes or can send their score report directly to higher education institutions and employers, who may use it for admissions, scholarships, dual credit opportunities, campus experiences, internships, apprenticeships, industry certifications, and more.

Introduction to Engineering Design (IED) is a high school level foundation course. In IED students are introduced to the engineering profession and a common approach to the solution of engineering problems - an engineering design process. Students will develop skill in technical representation and documentation of design solutions according to accepted technical standards, and they will use current 3D design and modeling software to represent and communicate solutions.

Principles of Engineering (POE) is a high school level foundation course. Through problems that engage and challenge, students will explore a broad range of engineering topics, including mechanisms, the strength of materials and structures, coding and automation, and motion. Students will further develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.