# PROJECT LEAD THE WAY

| COURSE | CREDIT | OPEN TO | PREREQUISITE |
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| Introduction to Engineering Design (IED) | 1.0 | 9-12 | None |
| Honors Principles of Engineering (POE) | 1.0 | 10-12 | IED, or department recommendation |
| Advanced Computer Integrated Manufacturing (CIM) | 1.0 | 10-12 | Honors POE, or department recommendation |

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| **INTRODUCTION TO ENGINEERING DESIGN (IED)**<br><br>Prerequisite: None<br>Open to:  Grades 9-12<br>Length:  2 semester<br>Credits:  1.0<br><br>Course Number: IT1000 | Using state-of-the-art 3D design software, discover the role of an engineer in taking an idea from the design process to product testing to manufacturing or production. Produce an incredible, working prototype of your project with a 3D printer. You will work on projects, activities, and problems not only of interest to you, but that have global and human impacts. Work in teams to design and improve products, document your solutions, and communicate them to others. |

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| **HONORS PRINCIPLES OF ENGINEERING (POE)**<br><br>Prerequisite: IED or department recommendation<br>Open to:  Grades 10-12<br>Length:  2 semesters<br>Credits:  1.0 (Honors credit)<br><br>Course Number: IT2200 | In the second course in the PLTW series, through problems that engage and challenge, students will explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students will develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. |

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| **ADVANCED COMPUTER INTEGRATED MANUFACTURING (CIM)**<br>Prerequisite: Honors POE, or department recommendation<br>Open to:  Grades<br>Length:<br>Credits: 1.0 (Advanced Level Credit)<br><br>Course Number: IT3200 | Manufactured items are part of your everyday life, yet most people have not been introduced to the high-tech, innovative nature of modern manufacturing. This course illuminates the opportunities related to understanding manufacturing. You will learn about manufacturing processes, product design, robotics, and automation. Students can earn a virtual manufacturing badge recognized by the National Manufacturing Badge system. |