

# Memo



**To:** Dr. Cheryl McCarthy  
**From:** Dr. Karla Guseman  
**Date:** May 7, 2019  
**Re:** Project Lead the Way – Engineering Program of Study

Our Science, Technology, Engineering and Mathematics (STEM) Academy is one of five Career Academies and the mission for our STEM Academies at both campuses is to provide students with a rigorous and relevant curriculum that prepares them for success in pathways related to architecture; construction and manufacturing; engineering and science; and transportation and logistics. Our goal for all JTHS students is access to challenging and stimulating curricula that affords each student an opportunity to acquire college and career readiness skills for success in post-secondary coursework and careers. The Project Lead the Way (PLTW) Engineering program of study offers JTHS an opportunity to continue a quality pre-engineering program with the added benefit of accreditation recognized nationally by post-secondary institutions.

As an Instructional Leadership Team (ILT), we continuously review and refine courses and associated prerequisites within each program of study. Due to this review, we are recommending the following changes to the PLTW Engineering program of study:

## PLTW Introduction to Engineering and Design (IED)

The recommendation is to change the pre-requisite from *Successful completion of Algebra 1 with a C or better or a Math EXPLORE 8* to *Not enrolled in math support*. The rationale for this change is to allow additional students the opportunity to enter this program of study.

## PLTW Computer Integrate Manufacturing (CIM)

The PLTW Computer Integrated Manufacturing (CIM) course has not generated student interest over the last few years. After exploring PLTW options available and current offerings at surrounding schools, the recommendation is to offer a course that allows each student to identify their area of interest. The CIM course limits student exposure to various potential engineering fields. Therefore, the recommendation is to eliminate this course and replace it with PLTW Engineering Design and Development (EDD) for the 2019-2020 school year.

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## PLTW Engineering Design and Development (EDD)

This course would replace the PLTW CIM course in the program of study course sequence for the 2019-2020 school year and has the following course description:

This is an open-ended engineering research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process. Students will perform research to select, define, and justify a problem. After carefully defining the design requirements and creating multiple solution approaches, teams of students select an approach, create, and test their solution prototype. Student teams will present and defend their original solution to an outside panel. While progressing through the engineering design process, students will work closely with experts and will continually hone their organizational, communication and interpersonal skills, their creative and problem-solving abilities, and their understanding of the design process.

Additional course information includes the following:

- Length of course: 2 semesters
- Credit: 1.0 credit
- Grade Weight: Weighted Course
- Grade Levels: 11; 12
- Prerequisites: PLTW Principles of Engineering (POE)

These program of study recommendations were discussed and approved by the Curriculum Coordinating Council and are endorsed by Administrative Council.

Thank you and please let me know if you have further questions.