



Course Prospectus

Introduction to Engineering Design (IED)

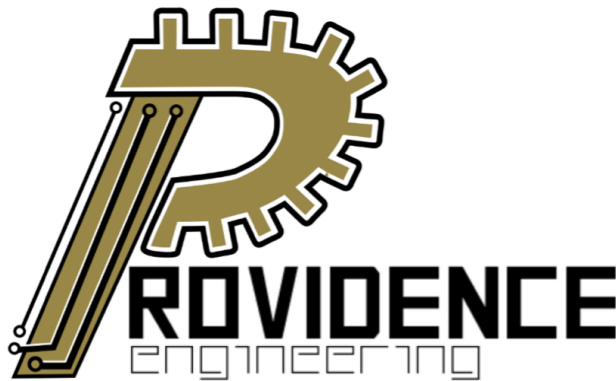
Mr. Vincent

Email	matthewd.vincent@cms.k12.nc.us
Office Phone:	980-343-5390
Course Wiki:	phsengineering.org

Tutoring: Monday after school or by appointment (email or phone)

Materials and Supplies:

- Mechanical Pencils
- Pens
- Graph Composition book
- USB Flash-drive
- Box of Tissues (Donations appreciated)
- Clorox wipes (Donations appreciated)



Welcome!

Hi there! I hope that everyone has had a wonderful winter break! I am really looking forward to teaching your child this semester. This is my fourth year teaching at Providence and I couldn't be happier about it! We have some great stuff planned in our course to cover together. I just want to let you know that I am here to help your child learn about Engineering and have fun while doing it. Please do not hesitate to

contact me through email, Class Dojo, or Class Messenger! We are going to have a great semester together! Also please check my website above for information on signing up for Class Messenger and Class Dojo!

Course Description:

Introduction to Engineering Design (IED) is a high school level course that is appropriate for 9th or 10th grade students who are interested in design and engineering or another technical career. The major focus of the IED course is to expose students to a design process, professional communication and collaboration methods, design ethics, and technical documentation. IED gives students the opportunity to develop skills in research and analysis, teamwork, technical writing, engineering graphics, and problem solving through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB-learning challenges students to continually hone their interpersonal skills and creative abilities while applying math, science, and technology knowledge learned in other courses to solve engineering design problems and communicate their solutions. IED also allows students to develop strategies to enable and direct their own learning, an ultimate goal of education.

No previous knowledge is assumed, but students should be concurrently enrolled in college preparatory mathematics and science courses in order to facilitate the use and understanding of appropriate math and science concepts necessary for the successful completion of IED coursework. In addition, students will use industry standard 3D solid modeling software to facilitate the design and documentation of their solutions to design problems and challenges. As the course progresses and the complexity of the design problems increase students will learn more advanced computer modeling skills as they become more independent in their learning, more professional in their collaboration and communication, and more experienced in problem solving.

Introduction to Engineering Design is one of the foundation courses in the Project Lead The Way high school pre-engineering program. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology.

The course of study includes:

- Design Process
- Technical Sketching and Drawing
- Engineering Documentation and Drawing Standards
- Measurement and Statistical Analysis
- Applied Geometry
- 3D CAD Solid Modeling
- Reverse Engineering
- Product Design
- Engineering Ethics
- Virtual Design Teams
- Presentation Design and Delivery

Policies:

- Late Work - 10 points off every school day late up to 5 days.
- Make-Up Work - Given 5 school days from students' absence from class to receive full credit. Afterwards late work policy is in effect.
- Participation – Students will be given a weekly participation grade based upon how well they follow the class rules and their productivity during class time. Students and parents can monitor their participation by checking Class Dojo. The percentage that you see there will be your students participation grade for that week.
- Canvas – students are required to use Canvas to complete the course. This is where many assignments will be submitted and students can access all of the course content. This all can be accessed using any device with an internet connection. A link to the login is on my wiki page.
- Class Dojo and Class Messenger - You can monitor your student's behavior through Class Dojo through their app or on the internet at classdojo.com. Class Messenger is a communication tool that I will use to connect with you and the students and to keep you updated on what we are doing in class. For more information on these great tools please visit the class resources page for the class on my web site! ***Everyone will need to get signed up for these in the first week.***
- Quizlet – students are encouraged to go to my wiki page and click on the link to join my Quizlet class in order to better familiarize themselves with the key terms in our class.
- Communication – please do not hesitate to contact me via Class Messenger, ClassDojo, or email. I will try to respond to communication in a timely fashion.
- Teaching Style - a 21st Century Classroom
 - **Parents/Guardians,**
 - Given that we live in an ever shrinking world in which graduates will be competing with students from other countries for jobs, we must strive to create individuals who will be competitive in a global job market. In order to do so I want to develop skills in our students that will equip them to be independent life-long learners who can adapt to meet any

challenging task at hand. As a result of this, I will require students to show their mastery of the curriculum.

One of the unique features of using a mastery learning model is that not all students will be working on the same assignment at the same time. Some students will work faster and are encouraged to do so; others will stick to our schedule and meet the weekly benchmark exactly; others may fall behind some, but this is OK, these students will receive personalized assistance from their teacher in order to help them through the material.

NOTE: all work for a unit must be completed prior to taking the unit exam. In addition, an exam must be passed with a 75% before proceeding to the next unit.

- **Grading** - students will be graded weekly on the student's work completed compared to the assigned workload. This is called their weekly progress.
- Please go over this with your student and let me know if you have any questions! I am here to help!

Evaluation:

Due to Powerschool there are 2 categories of of grades that I categorize called Formal and Informal. Formal includes Assessments and Projects (Excludes the Mid-Term and Final) while Informal includes assignments and participation. Here is the breakdown by Quarter:

1st Half

Formal (Projects, Assessments)	60%
Informal (Assignments, Participation, Weekly Goals)	20%
Mid-Term Exam	20%

2nd Half

Formal	70%
Informal	30%

Final Grade

1st Half Grade	40%
2nd Half Grade	40%
Final Exam	20%

Please go over the information on this syllabus with your student and let me know if you have any questions. I am here to help! Then fill out the information listed below and have your student return it to me ASAP. The above info. is for you to keep!

- My student will have no trouble accessing course content through the internet on a daily basis.
- My student does not have internet access and will bring a flash drive to work on the content at home.
- I will sign up for Class Dojo and Remind using the information attached with this prospectus before the end of the first week of school.
- I will complete the Parent Questionnaire found underneath Class Resources on the class web page at phsengineering.org

Student Name: _____

Student Signature: _____ Date: _____

Parent/Guardian Name: _____ Relationship to student: _____

Best way to contact you from 8am-3pm

Email: _____

Phone: _____

Parent/Guardian Signature: _____ Date: _____