

## Welcome to Foundations of Engineering –Syllabus–

**Course Description:** Foundations of Engineering and Technology is the introductory course for the Engineering and Technology Pathway. This STEAM driven course provides an overview of engineering and technology and gives students a hands-on learning experience of different fields in Engineering.

**Our Class Mission Statement:** To create a safe & positive learning environment where every student learns the skills and habits needed to create meaningful change for the challenges of their future.

**My Goal:** It is my plan for each students' learning experience to be directed through topics of their individual interests. This course covers a wide range of content spanning countless careers and studies that having a mastery understanding of is far beyond the scope of a 4-year high school experience let alone one class. As such, I do not intend this course to delve into the full depth of all the content covered, but rather I aim to introduce students to a vast world of engineering and to help students become life-long learners.

I define my goal for this semester as each student discovering something they are excited about learning and to provide them the resources and skills to pursue this knowledge. To meet this goal, I encourage you as the student to draw upon not only what you learn in this classroom but your own experiences, culture, knowledge and interests.

**What You Should Expect from Me:**

- I will uphold a positive learning environment where every student is welcome in my classroom and provided a fair opportunity to succeed in this class regardless of their prior knowledge, race, gender, beliefs, culture or school history.
- I will return graded assignments in a timely manner and hold myself accountable just as I expect the same from you.
- I will respect that every student comes to this class with different learning needs and preferences. I will do my best to differentiate to best serve each of you.
- I will respect your opinions and value the strengths you bring to my classroom and be patient with you as you develop your weaknesses.
- This is my first year teaching this course and I expect my plans to change and develop as the year progresses. I will be honest and transparent with you about these changes and my mistakes as the year progresses and this course develops.
- Remediation and makeup work is available for any and all assignments. It is more important to me for that you understand the content and have a desire to learn than it is important for me when you understand/want to learn this content.
- I will always welcome your feedback and input.

**What I Expect from You:**

- Respect your peers.
- Support your peers and act with consideration of their best interest.
- If you are excited or interested in something, share it with me!
- Take ownership of your learning and learning environment. Treat tools and materials with respect by using them appropriately and returning them to where they belong.
- Come to class on time and be ready to engage in the lesson at the start of the bell.
- I understand that you have other classes and a life outside of my class. If you ever find yourself overwhelmed or behind in my class, please come talk to me.
- If you know you are going to be absent or turn in an assignment late let me know beforehand. You'll have better luck asking for permission than forgiveness.
- Do not give up on yourself in this course and check out. If you are unhappy with your learning direction any other aspect of my class come talk to me.

## Grading:

10%	Class Engagement
30%	Classwork/formative assignments
50%	Unit Tests, projects & summative assignments
10%	Final Reflection/Project

***A note on the class engagement grade:*** There will only be one assignment for this in the gradebook, and its numerical score will be fluid. At the start of the year, everyone will have a 100% in class participation and it is my hope that this is also true at the end of the semester. As long as you are not regularly behaving in a manner that impedes the learning environment of you or your classmates, this grade will remain at a 100%. However, if not I will make a note of this in the gradebook for this assignment and adjust the grade accordingly (the same is true for bringing this grade back up).

## About the Engineering Pathway:

To complete the Engineering Pathway, you must take the three following courses in any order: Foundations of Engineering, Engineering Concepts and Engineering Applications. At the end of the semester which a student is enrolled in the third of these classes (traditionally Engineering Applications), a student must take the end of pathway exam in order to receive the official certification of completion. An optional fourth class, Research and Design, is offered after completion of the pathway.

## Film and Photo Permission:

During the semester photos will be taken to display in the classroom, portfolios, and on the blog, there will also be times that curriculum related videos will be shown, there may be a time when the videos will be PG-13.

## Cell Phones:

Use your phones for good and not for evil! The world you are growing into revolves around technology and Smartphones, especially so in a technology class. It is my expectation that each of you are responsible enough to use your phone as a resource to facilitate your learning and not impede it, and until you prove me otherwise, I will trust you to self-manage your phone use.

## Teacher Information:

Please feel free to contact me at any time in one of the following ways:

1. If available, before or after school. I am usually more available in the mornings as I am involved with some after school club or sport nearly every day.
2. By email at [mars.berwanger@cobbk12.org](mailto:mars.berwanger@cobbk12.org) (PREFERRED METHOD FOR PARENTS)
3. by telephone: please call the school on 770.578.3266 and ask to be forwarded to me.

View my blog: <https://wheeler-engineering.weebly.com/>

## Finally!

Engineering is an exciting and dynamic field, one that I have thoroughly enjoyed learning and working in and look forward to teaching. In addition to introducing the foundations of the various basic engineering fields, we will use a great deal of creative thinking and problem-solving skills which are invaluable traits for wherever your life may take you. My hope is to spark an interest in every student as we learn a lot and have fun time doing it!