Project Lead the Way®: (AE) Aerospace Engineering

Waynesville High School
Course: Project Lead the Way® Aerospace Engineering (AE)
Instructor: Mr. Bill DeMalade
Phone Number: 573-842-2400  ext 3173
Email Address: wdemalade@waynesville.k12.mo.us
Website: www.pltw.org

Course Description:
Welcome to the “Aerospace Engineering” Course! Aerospace Engineering™ (AE) is the study of the engineering discipline which develops new technologies for use in aviation, defense systems, and space exploration. The course explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. In addition the course presents alternative applications for aerospace engineering concepts. Utilizing the activity-project-problem-based (APPB) teaching and learning pedagogy, students will analyze, design, and build aerospace systems. While implementing these designs, students will continually hone their interpersonal skills, creativity, and application of the design process. Students apply knowledge gained throughout the course in a final multi-media project to envision their future professional accomplishments. Aerospace Engineering is a high school level course that is appropriate for 10th, 11th, or 12th grade students interested in Aerospace. It is recommended that students are concurrently enrolled in college preparatory mathematics and science courses and have successfully completed the Principles of Engineering (POE) course. AE is one of the specialization courses in the Project Lead The Way high school engineering program. The course applies and concurrently develops secondary-level knowledge and skills in mathematics, science, and technology.

Materials Needed for Class: Students are required to have these materials daily:
- Pencil
- Pen
- 2” 3-Ring Binder
- Lined and/or Graph Paper
- Notebook Dividers
- Large Eraser
- Flash Drive (USB) (Must hold at least 8GB)
- *Engineering Notebook

*The first engineering notebook is provided by Mr. DeMalade. If you lose it. A new one will cost $5 dollars.

Attendance and Timeliness: All students are expected to be on time to class with the proper materials. Grade points may be deducted for coming to class without the proper materials each day. Students should be seated with their pencil/pen and materials out and completing the assignment on the board while classes are still changing. Students do best when they are in class and ready to learn.

Class Discipline: Students who choose not to follow the rules will be subject to the consequences listed below:
- 1st Offense: Warning by Instructor (Documented) Guardian contacted (Documented)
- 2nd Offense: Disciplinary Referral (Documented)
Course Grades:

Assessments/Drawings/Design Process – 70%
Quizzes/Homework – 20%
Final/EOC – 10%

***Be sure to have your FULL name on each assignment turned in. Failure to do so could result in an automatic zero. Be proud of your work!

Class Management Guidelines:
The purpose of this lab is to provide all students with a fundamental knowledge of engineering; in an environment that is safe and learning oriented. In order to do this effectively, each student is required to give his/her full cooperation and be on his/her best behavior. The lab is not a place for play or carelessness. The lab contains expensive equipment, which must be handled carefully and safely. Any equipment and/or materials damaged by individuals’ will have a penalty and/or consequence.

a. You must be prepared for class:
   i. Bring all materials to class (have them out, be seated, and start work)
   ii. Make sure to be in class each and every day
   iii. Be on time for class

b. Attendance and make-up work:
   i. Excessive absences will be detrimental to you passing the class
   ii. It is your responsibility to obtain your make-up work or schedule a time to make-up your work
   iii. You have one day longer than the number of days you missed to make-up your work

c. Tardy:
   i. If tardy to school, student must have a pass from the office to enter class
   ii. If tardy to class, student must sign-in when entering class
   iii. If leaving class early, student must have prior permission and must sign-out of class
   iv. Students have 5 minutes to get to class before tardy

   v. Students that arrive more 10 minutes late to class must have a tardy slip from office
   vi. If tardy one minute past the middle of class; student will be counted absent
   vii. Tardy consequences: as per handbook

d. Respect:
   i. Do not talk while I talk or others are talking
   ii. *No* cursing or complaining
   iii. Appropriate dress code is strictly enforced
   iv. *No* inappropriate use of a cellular device
   v. *No* Games
   vi. *Always* be respectful and courteous to each other and the instructor

e. Lab Rules:
   i. No food, drinks, or gum
   ii. Classroom phone is not for student use
   iii. No horseplay of any type
   iv. *No* Bullying
   v. *Do NOT* insult another students thoughts or ideas
   vi. *Do not* write on furniture, equipment, or materials at anytime!

*If rule is violated, student will be referred to an administrator immediately.
Classroom Routines:

**Late work:** Accepted per student handbook.

**Questions or Comments:** Always raise hand unless otherwise noted.

**Stop Work and Look Up:** When teacher tells you to stop working, students are to stop working immediately and look up at the teacher. It is often times hard to stop work, but it has to be done in a timely manner.

**Shop/Lab:** In the shop, students are to be on their best behavior. There are many tools and equipment in the lab and “horse-play” is not acceptable at anytime. Shop rules will be presented when we move into the shop for an activity.

**What’s the Bottom-line?**

**Bottom-Line:** In order to be success in PLTW Engineering, students are expected to follow all classroom rules and procedures, dress appropriately, be safe, be respectful at all times, complete all activities/assignments, and most of all, enjoy learning! I am glad you are here and I look forward to getting to know you over the semester!

**IMPORTANT NOTE:**
In order to participate in Waynesville Schools Project Lead the Way® Engineering Program, all students are required to return all 3 forms below signed and pass a safety test with 100% accuracy.
Guardian Contact Form
All students are required to return this form!

________________________________
Print Student’s Full Name

Period in Engineering Lab: ______ Course Name: __________________________________________

Father’s Name: __________________________

Mother’s Name: __________________________

Guardian of Student (if not parents): __________________________

Father’s Work Phone: __________________________

Mother’s Work Phone: __________________________

Home Phone: __________________________

Cell Phone: __________________________

Parent’s E-mail Address: __________________________

Please read the entire syllabus, sign and return.
I have read and understand the classroom rules and know what is expected.

________________________________
Parent Signature

________________________________
Student Signature

Date Signed: ______________________

Any comments the instructor should know:
Photo Release Form

All students are required to return this form!

_________________________________________________
Print Student’s Full Name

I hereby grant the Waynesville High School’s Project Lead the Way (PLTW)® Engineering Program permission to use my child’s photograph in any and all of its publications, including website entries, without payment or any other consideration. I understand and agree that these materials will become the property of Waynesville High School and will not be returned.

I hereby irrevocably authorize the Waynesville High School’s PLTW® Engineering Program to edit, alter, copy, exhibit, publish or distribute photos for purposes of publicizing and marketing the program or for any other lawful purpose.

In addition, I waive the right to inspect or approve the finished product, including written or electronic copy, wherein my likeness appears. Additionally, I waive any right to royalties or other compensation arising or related to the use of the photograph.

I have read this release before signing below and I fully understand the contents, meaning, and impact of this release. (Please check below and sign bottom of release form).

___ Waynesville High School’s PLTW® Engineering Program MAY use my child’s photo.

___ Waynesville High School’s PLTW® Engineering Program MAY NOT use my child’s photo.

I hereby certify that I am the parent or guardian of _________________________, named above, and do hereby give my consent without reservation to the foregoing on behalf of this person.

___________________________________________  _______________________
(Parent/Guardian’s Signature) (Date)

___________________________________________  _______________________
(Parent/Guardian’s Printed Name)
Safety/Medical Release Form

All students are required to return this form!

_________________________________________________
Print Student’s Full Name

In the Waynesville High School’s Project Lead the Way® Engineering Program students will be exposed to many different forms of technology. Some of which include, but are not limited to: hand tools, power tools, knives (box/craft), saws, scissors, hot glue, soldering irons, lead, nails, screws, bolts, cutting tools of all kinds, hammers, wire, electronics, sharp objects, and moveable parts.

There will be a safety lecture and test at the beginning of the school year which must be passed with a 100%. There will also be a safety lecture on tools and materials used before each project and/or activity. Safety glasses will be provided and must be worn throughout the entire class period when any student is working with any tools and/or materials for mentioned about.

In order to participate, in the Waynesville High School’s Project Lead the Way® Engineering Program, guardians/parents must give their child permission to use the above and any non-listed tool or device in the classroom to complete projects/problems.

I grant my child permission to use and/or participate in the classroom with the above mentioned and any non-listed tools and devices in the classroom.

_______________________________________
(Parent/Guardian’s Signature) (Date)

_____________________
(Parent/Guardian’s Printed Name)

Please list any medical conditions that might be irritated by smoke, dust, sawdust, wood, lead, or any other chemical or material. Or list anything that you feel the instructor should know about your child in the lab environment.

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

DeMalade  Page 6