



Waltrip Engineering and Fabrication Program of Study
Phone: 713-688-1361 Website: www.houstonisd.org/waltrip
Principles of Applied Engineering

Instructors: Interim Mr. Blassingame and Mr. Bain (6th period)

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Room: Blassingame 1104 and Bain (6th period) 1123

Off Period: Blassingame Periods 4 & 5 - Bain Periods

Course Content

Principles of Applied Engineering provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will develop engineering communication skills, which include computer graphics, modeling, and presentations, by using a variety of computer hardware and software applications to complete assignments and projects. Upon completing this course, students will understand the various fields of engineering and will be able to make informed career decisions. Further, students will have worked on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments.

About the Teacher

I am a dedicated associate teacher at Waltrip high school and have been for the past nine years. I am excited to be starting the year off with the engineering and fabrication program of study. I will be working with Ms. Witherspoon (Spoony) and Mr. Rakha to ensure that you are gaining the knowledge and skills necessary to be prepared for your next course in this program of study.

Ongoing Objectives

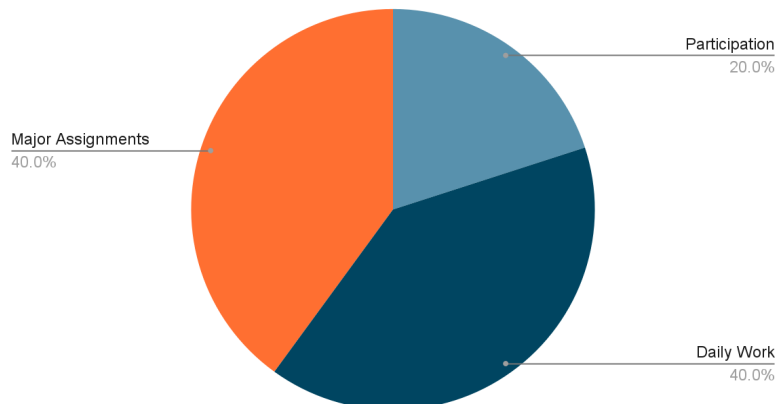
- Become a Certified SolidWorks Associate (CSWA)
- Become certified in Autodesk
- Earn Core NCCER Certification
- Developed Hard and Soft Skills for Employment

Portfolio

Students are required to maintain an organized digital portfolio for the course. It will be submitted as a grade during each project cycle. Portfolios are digital and are created on Google Site here is a [sample portfolio](#)

Grading:

Grading Categories



Attendance and Participation

Attendance and participation are required; it is difficult to learn the content if you are not present in

class.

Scoring policy:

Absent = 0
Present = 50

Assessment of work = 60-100

If you are present you and you turn an assignment in you will be scored starting at 60 and can earn points based on the quality of the assignment up to 100 points or more if the work is superior.

Late Work related to an excused absence

3 days to turn in the assignment no points deducted full credit eligible for an excused absence

Late Work unexcused absence

For each day late for any graded assignment, 10 points will be deducted from potential points possible 50% will be scored for the grade. The lowest score on a completed and turned-in assignment is 60. Assignments will not be accepted three weeks after the due date or after the grading cycle ends whichever comes first.

ASSESSMENT RETAKE POLICY

A student will be permitted to retake any major test. The retest must occur within five (5) school days of the date the grade was received. The higher of the two test grades will be recorded. This does not apply to final exams. CSWA retakes must wait at least 14 days per SolidWorks policy.

Classroom Procedures

Classroom Norms

Cell phones out of site
Respect to all
Follow all school rules
Keep volume level appropriate
Professional language only
Raise hand for questions
Participate in class discussions
Stay on task / on topic
Attentive – Sitting upright

Consequences

Warning
Written Warning
Contact guardian
Referral to office
After referral, each following infraction is a referral

Daily Required Materials

Laptop with charger*.Laptop wireless or wired mouse (Optional for CAD)*Writing Utensils*Project materials

Course Overview

Unit 1: Introduction to Applied Engineering

Unit 2: Portfolio Planning and Introduction to Media to be Used in this Course Unit

3: Safety Preparation for Applied Engineering

Unit 4: Exploration of the STEM Field in Applied Engineering

Unit 5: Exploration of the STEM Field with Focus on Modeling and Design Unit 6:

Exploration of the STEM Field with Focus on Robotics, Process Control, and Automation Systems

Unit 7: Exploration of the STEM Field with Focus on Electrical and Mechanical Systems Unit

8: Exploration of the STEM Field with Focus on Drafting

Unit 9: Preparation for the Workforce

Unit 10: Teamwork in STEM

Unit 11

1: Planning for Careers in STEM

Unit 12: Extended Learning Experience

Students, please note that if at any time during your participation in the Engineering and Fabrication Program of Study you find that the teacher-selected project is not something you are interested in and you have an idea for a project that you would like to do and that project covers the same TEKS. You may request to complete an instructor-approved project.