

Phone: 713-688-1361 Website: www.houstonisd.org/waltrip

Principles of Applied Engineering

Instructor: Mr. Vo **Email:** lvo1@houstonisd.org **Room:** 1106 / TEAMS
Office Hour: Monday 3:25 – 4:10 ***** Tuesday – Friday 1:50 – 2:35

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 began my teaching career as a math teacher in 2009 in Chicago, IL. In 2014, I relocated to Houston to teach mathematics at Waltrip High School. I'm currently an Engineering and Fabrication Program teacher. I married my wife in 2015, and we're proud parents to Jacob (07/30/17) and Josiah (07/15/19).

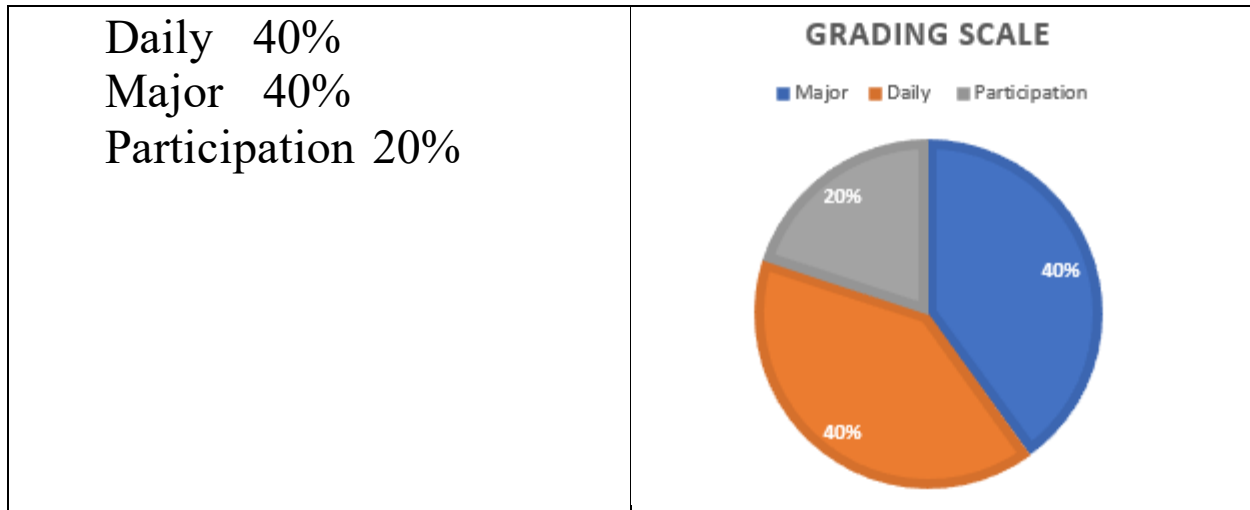
Ongoing Objectives

- Become a Certified SolidWorks Associate (CSWA) and Certified SolidWorks Associate (CSWP)
 - 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 a sample portfolio is available at <https://bit.ly/3gScEwq>

Grading Scale



Attendance and Participation

Attendance and participation are required; it is difficult to learn the content if you are not present in class. Your class participation and attendance can be a deciding factor if your class average straddles two grades. Be sure to see me about any missed work if you are absent. In the event of an unexpected absence (i.e. illness, emergency, etc.), the student is responsible for ensuring that the absence is excused before assignments (available on the HUB) can be turned in and graded. Student will have three (3) days to turn in completed work. Students will be given at least one opportunity to submit late work following an absence. Grade penalties and the amount of time allowed to complete the assignment are as follows:

Late Work related to an absence:

3 days to turn in the assignment no points deducted full credit eligible

Late Work NOT related to an absence:

- 1 day late -10 points max 90
- 2 days late -20 points max 80
- 3 days late -30 points max 70
- 4 days late -40 points max 60
- 5 days or later - zero assigned to the grade book

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 30 days per SolidWorks policy.

Online Norms

- Camera on (preferred)
- Dressed for class
- Microphone muted when not speaking
- Raise hand for questions
- Participate in chat – on task / on topic
- Attentive – Sitting upright
- Engage in discussion and activities

Daily Required Materials

1.laptop2. Writing Utensils 3. Project materials4. Homework (late work by 11:59 PM)

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: Planning for Careers in STEM

Unit 12: Extended Learning Experience