

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

Instructors: Mr. Rakha and Ms. Witherspoon "Spoony" Email: <u>swithers@houstonisd.org</u> or <u>adel.rakha@houstonisd.org</u> Room: 1106 and 1108 Off Periods: Rakha 1st and 4th / Spoony 3rd and 4th

# **Course Content**

**Practicum in STEM** is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Science, Technology, Engineering, and Mathematics (STEM) Career Cluster. Practicum in STEM is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

**NOTE:** The major reason students take a practicum is to provide additional time on task for learning specialized skills

## Text

The textbook for the course is Core Curriculum: Introductory Craft Skills Trainee Guide 5<sup>th</sup> Edition

### About the Teachers

Stephanie "Spoony" Witherspoon is a certified CTE instructor, a graduate of California Polytechnic State University in San Luis Obispo, CA with a BS in Agricultural Sciences and a Masters in Science Education for Northeastern State University in Tahlequah, OK. In addition to teaching courses in the Engineering and Fabrication Program of Study, I coach the Waltrip robotics team and sponsor the Texas Technology Student Association. You will usually find me in the Waltrip FabLab making something cool or a mess.

Adel Rakha is a mechanical engineer and mechanical technologist, certified CTE instructor, an Indiana State University graduate, and Alexandria University faculty of engineering graduate.

### **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 here is a <u>sample portfolio</u>

### Grading:



### 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**

Section 1: Science, Technology, Engineering, and Mathematics (STEM) Practicum Introduction Section 2: Application of Communication Skills in the STEM Field Section 3: Application of Research in the STEM Field Section 4: Application of Problem-Solving Skills Section 5: Application of Workforce Professionalism Section 6: Application of Strong Work Ethics Section 7: Application of Safety Section 8: Teamwork in STEM Section 9: Leadership in STEM Section 10: Planning for a STEM Career Section 11: Pursuing a STEM Career

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.