

PLTW Engineering Course Syllabus

VERSION 1.6

The focus of the PLTW curriculum is to expose students to the various disciplines of engineering. The PLTW courses give students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. I expect **all students** to complete the assignments both thoroughly and on time, and I expect all students to put forth their best effort in completing the challenges. Students who do not meet these expectations will definitely not pass this course.

Course Framework

1. **Assignments** –Assignments can range from doing calculations, sketches, previewing and taking notes on the Powerpoint presentations, programming, participating in various in-class challenges, and giving presentations. Students will be responsible for completing these assignments we call “deliverables” in a timely manner and with maximum effort.
2. **Discussion** - Every student will be given an equal opportunity to succeed in our class discussions and a student’s success in them is a matter of how well one prepares for them e.g. careful reading, taking notes in detail, practicing problems, whether they are actively involved in the discussion. The class discussion is worth 10% of a student’s total grade and one’s grade is based on how many points he or she accumulates during the entire semester. Students are expected to maintain at least 70% of the highest person’s discussion score in order to receive full credit. A student with a percentage under 70% will receive that percentage as their discussion grade e.g. 50% = 5% as their discussion grade; 32% = 3.2% as their discussion grade; 87% = full 10% as their discussion grade. Discussion point totals are updated on a weekly basis and weekly totals can be found on the class website. Students are to date and tally up their daily points on the assignment that we are discussing that day. We will collect points at the end of each class period.
3. **Participation** – My biggest pet peeve is when students do not utilize their time in class wisely; especially when an assignment has been given or when the assignment can only be completed in class. Students will be given a set amount of points per week. If a student is not using their time in class for whatever reason they will lose their points for the week. Any further time that is wasted will result in points being deducted from previous weeks. A student’s participation grade will be calculated as a percentage of the maximum number points possible. Participation point totals are updated on a weekly basis and weekly totals can be found on the class website.
4. **Portfolio Binder** – One discipline of a successful engineer is the ability to organize and document one’s findings and ideas. Students will make sure that they utilize graph paper for engineering projects and technical drawings, and their documents organized in a three ring binder. Students are expected to keep a table of contents, every page in the binder numbered and ordered chronologically, and with all papers neatly hole punched and put in the binder. If you have questions regarding these items, please contact the teacher.
5. **Online Resources** – Utilize the class website at www.mrhwang.com to access the class calendar, download assignments, determine your total discussion and participation points, and find tutorials or other supplemental learning materials. Access the locked areas using the class login: *guest* and the password: *sweet*.

6. **Tests** - There will be periodic tests to monitor and evaluate knowledge of specific concepts or ideas introduced in class, the use of the CAD software, mathematical operations, building techniques etc. etc.

Grading

1. You grade will be determined by the standard district mandated scale of:

- 90 - 100% of the total points will be an A
- 80 - 89.99% of the total points will be an B
- 70 - 79.99% of the total points will be an C
- 60 - 69.99% of the total points will be an D
- 0 - 59.99% of the total points will be an F

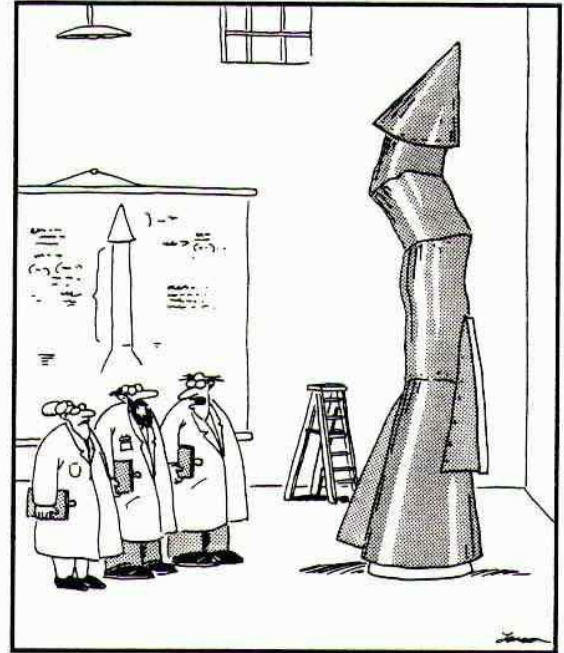
2. The total amount of points breakdown to approximately:

Deliverables:	30%
Tests:	50%
Discussion and Participation:	20%

3. All students will receive a 1% bonus to their grade at the end of the semester. However, it will be forfeited if any of the following occurs:

- you receive a disciplinary referral anytime during the semester including for tardiness
- cheating on ANY challenge, quiz, or deliverable (which includes plagiarizing)
- ditching or cutting class
- the teacher is forced to call home or contact your parent due to disciplinary reasons
- any letters, report cards, or grade printouts that are sent home and not received by the parent.

4. Otherwise, there will be NO curving or rounding up of grades.



"It's time we face reality, my friends. ...
We're not exactly rocket scientists."

Daily Procedures

Please observe the following procedures so that we can ensure that each class runs smoothly and that we can use our class time effectively.

1. Enter the classroom and quietly prepare for the start of class. This can mean taking out your homework, engineering journal, and/or other materials that will be used in the class that day. For other classes, this could mean that you go get your laptop and immediately login. Do not ask me anything during the beginning of class as I am often busy taking roll or setting up an activity or lab. Save your questions for later in the period. There is usually music playing at the beginning of class. When that music is muted, that is your signal that I need your complete attention. I will then ask for you to line up so that your homework can be evaluated and stamped.
2. At the end of class, once materials are put away, students need to remain seated until excused. This is to ensure that all things are put away, that homework can be assigned and/or clarified, and that tomorrow's agenda can be quickly discussed. Push in your chair as you leave.

Classroom Rules

1. **Be respectful.** When I or someone else is speaking, there should not be any other talking or noise. The speaker's words should not be distracted by someone else's comments. So listen for and carefully follow my directions.

2. **Be disciplined.** I expect everyone to come into class and to start working on their assignments without any prompting. Since you will not be able to work with the kits at home, our time in class is precious. You will go through and learn from the tutorials and document what is required in your journal to the best of your abilities. Do not waste your time by giving less than your full effort. You will not waste time socializing. You will not work on anything except for our assignments while in class. When you are done with a tutorial go on to the next one. When you are done with all the tutorials, move on to the engineering challenge. When done with that, figure out how you can make it better and finish up the deliverables. There is always something that you can do during our class time together.



"Matthews ... we're getting another one of those strange 'aw blah es span yoi' sounds."

3. **Be responsible.** The equipment that we are using is quite expensive and can be delicate as well. So all effort must be taken to prevent any damage or loss to them for future classes. Students who are grossly negligent will receive a referral and may be asked to pay for any damage that they may incur. And just to see if you're reading this, email me at

jhwang@wvusd.org with the class mantra in the subject line and your name and period and you'll get some extra credit.

4. **Be prepared.** Bring your binder and journal every day. Make sure you take care of your biological needs (restroom, water) before class and/or during break.

5. **Be honest.** Do not cheat or copy someone else's work. You will not only receive a zero on the entire homework packet, you will also receive a referral. Remember, plagiarizing is cheating as well. If you copy someone else's drawing, program, or file and turn it in as your own, you will receive a zero and a disciplinary referral. When utilizing somebody else's information or program that is found online, you need to give credit to that person and to indicate that on in your deliverables and in your program. If you claim that information as being your own, it is considered cheating. On a test, don't let your eyes roam and keep your tests covered. Any attempt to cheat on your discussion points will result in your total being reduced to zero at the time of your offense. If you get caught for any of the offenses above, you will call your parent or guardian in front of the class, and then explain to them what you did to receive the zero.

6. **Be conscious of the school rules.** Eating, drinking, cell phone, texting, dress code, tardiness, wearing headphones etc. etc. Students will be marked late if they are not in their seats when the

bell rings. Students will receive a referral even if I suspect you are using your cell phone in class.

Late Homework Policy

If your homework is going to be late, you should still complete it and turn it in when we collect homework packets on test day. Though you will only receive half credit, it is better than receiving a zero on the assignment and that you will not be at a disadvantage during our classroom discussions or be unprepared when you take the test. Make sure you make a note to me that it is late when you turn it in with the homework packet.

Makeup Work

For any homework that is due on the day that you are absent, YOU must have it stamped by me on the day that you return or else it will be counted as late when the homework packets are graded. If you are absent, please check the online class calendar first to see what you have missed so that you will not fall behind the other students. Many handouts are available for download from the class website if you are absent. If it is not available online, send me an email and I can send you a digital copy of it. If you are absent on a test or quiz day, it is YOUR responsibility to remember and take the test during makeup week. (makeup week is usually the last week of the grading period during lunch). Make sure you do not miss too many tests, because you are often at a disadvantage when you have to make up multiple tests over a short period of time and often the content is not as fresh in your mind.

How to succeed in this class...

- Ask questions, participate in class, don't be shy and stop trying because you've answered a question incorrectly
- Put your full effort in reading and taking notes. Don't just copy down random statements from the Powerpoint presentations without understanding them.
- Maximize your class time, even if you are done with one task, there are always other things that you could be doing.
- Don't forget that I can see what you are doing on your classroom computer, what websites you've visited, and what programs you've accessed. So stay on task!
- Set aside time to ONLY do your homework, don't chat, surf, use your phone, or watch TV at the same time;
- Get help during my "office hours," M-Th during lunch
- Use the class calendar to get organized and to prevent procrastination
- Don't provide me a reason to say "no" when you ask me for a letter of recommendation this year or in the future.
- Live by the class mantra "Discipline yourself, so no one else has to."



"Now that desk looks better. Everything's squared away, yessir, squaaaaaaared away."