In VEX, you will learn to program, build, and operate in the Vex Robotics Design system. What does it take to compete in the Vex Robotics Design System? What requirements do I need to succeed? First, you can enter the VRC competition season with relative ease at robotevents.com (preferably before that year’s season) and registering a VCR Team. There are several starter kits that Vex Provides for you to build your robot with, steel and aluminum are the 2 basic types of metal that are used in Vex, aluminum is usually about have as strong as aluminum but only 30% of the weight. The weight to strength ratio is higher for aluminum. The steel c-channels are technically stronger but you going to have to make up for that strength in weight therefore your robot will be much heavier. Each year there several base designs, such as claw-bots, rollers, of flip-backs.

These designs can be tweaked to fit your precise measurements, your intake will determine the individuality the most. Picking the correct programming software can also be an issue that you may encounter while programming your robot; Easy C, Robot C, and MBLP. Your best option would probably be Easy C. The Easy C Software is very easy to program with, although Robot C is more practical if you wish to make programming your occupation. Basically, Easy C uses text-based blocks to program with as where the Robot C Software uses the actual direct C++ (code) that you can edit for more precise programming. Part linkage; okay your best bet is to jest use nuts and tighten them securely, but I do realize that Nykock bolts may be necessary in circumstances. You can take off the Keps-nuts with your hands but you need to use a Vise Grip/pliers that you need to hold the Nylock Bolt steady while you screw it off, Autodesk states that Nylock Bolts are resistant to vibration. What about competitions? Well, I can’t really tell you what to do at the actual matches but I can give you a few pointers about the alliance picking ceremony. It all comes down to this, if you pick the correct alliance it may just land you a spot in the Vex World Championships but if you don’t it may just stop even the strongest wave of success. You need to look at the Win Points (don’t pay too much attention to “SP”) in each match to ensure your alliance’s odds of being successful during the elimination matches.

Why can’t my robot move during the first 15 seconds of the match? If you want to earn those bonus points, you need to have an autonomous!! The autonomous programming can become difficult because everyone has to pre-program their autonomous before the match, you will probably encounter problems during the autonomous period because once it starts, you lose the ability to control what happens thereafter. Try to make your autonomous as neutral as possible so you have the best odds of being successful in the autonomous round. To sum up, you need to have some well-rounded engineers on your team in order to succeed in Vex Robotics. You can build the most-excellent and flawless Vex Robot Design in the world, but if it cannot be programmed: it is useless. A little note, in Easy C, autonomous mode can be controlled using the smart-tasks functions. What are these “motor encoders?”, motor encoders are basically motors that have their own sensors similar to potentiometer. These sensors can sense the amount of rotations your robot has gone and sense the location and angle of your robot. They can be helpful during autonomous, because they can sense the degree and angle they have turned too, but servos would tell you how elevated you lift is. Potentiometer should be a helpful alternative, and I would recommend considering servo modules.

If you can operate, build, and program your robot (and hopefully enter the online challenges) you should have pretty fair odds of succeeding! Wait! How can I possibly hang? Good Question, what I would recommend doing it these case base the hanging of the tower/lift. An individual mechanism is much more unreliable and probably would snap and send your robot crashing into the ground! That’s just something to think about! Anyway, I hope you found this draft helpful